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KNOWLEDGE CENTER SECURITY

It's a dangerous world, and not just outside the firewall. Clueless and disgruntled employees are an IT security problem, too. To help you out, we've compiled the hottest tips on topics such as identity management, insider abuse and instant messaging. **Stories begin on page 23.**

ONLINE EXCLUSIVE

Is your company secure? Take our quiz to find out

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www.computerworld.com

MARIA RENDON

Rapid-Reporting Mandate Adds to Compliance Woes

Companies need systems overhauls to meet Sarbanes-Oxley's 'material events' requirement

BY THOMAS HOFFMAN

Most companies that have taken steps to comply with the Sarbanes-Oxley Act have focused their energies on Section 404, a provision that requires businesses to document their financial-reporting controls and procedures.

But most IT managers have yet to tackle a potentially more onerous requirement: Section 409, which calls for companies to deliver timely reports to investors and other stakeholders on any "material events" that could affect the companies' finances or business operations.

That mandate, which the U.S. Securities and Exchange Commission is expected to start enforcing by 2005, could leave businesses with no choice but to make sweeping changes to their IT infrastructures in order to provide automated reporting capabilities that function at close-to-real-time speeds, CIOs and analysts said last week.

"There's a huge data and information infrastructure issue there that has to be tuned to respond to events — and most companies don't have these capabilities in place," said John Hagerty, an analyst at

Sarbanes, page 14

Feds Ponder MCI's Future

Despite settlement, carrier could lose government contracts

BY DAN VERTON

WORLDCOM FALLOUT

WorldCom Inc. may have overcome its problems with the Securities and Exchange Commission, but its political battles on Capitol Hill and throughout the halls of government are just beginning.

A U.S. District Court last week approved the SEC's amended proposed settlement with the telecommunications carrier, which is now doing business under its MCI brand. The settlement allows a civil penalty of $2.25 billion to be satisfied by a much smaller payment to shareholders and bondholders of $500 million in cash and $250 million in common stock upon emergence from Chapter 11 protection.

But a key issue that hasn't been resolved is whether MCI should be suspended or barred from holding government contracts. The Senate Judiciary Committee tomorrow will hold a hearing on the issue as part of a broader investigation into the ramifications of MCI's bankruptcy.

MCI has enough votes in the House Appropriations Committee to block an effort being pushed by rivals AT&T Corp. and Verizon Communications that would bar any extension of MCI government contracts

MCI Contracts, page 53

Businesses See Wi-Fi as Potential Lure

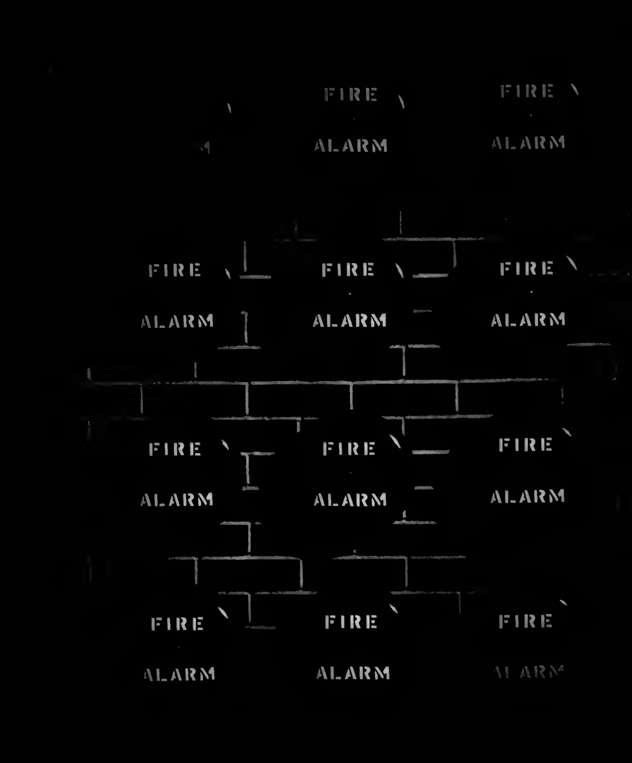
Restaurants, hotels wooing customers with wireless access

BY BOB BREWIN

As public-access Wi-Fi "hot spots" percolate out of coffee shops and into the wider world of hotels, fast-food chains and other locations, many companies are starting to view the wireless technology as an essential amenity for attracting customers.

But what's still unclear is how much businesses can charge customers to use the

Wi-Fi, page 16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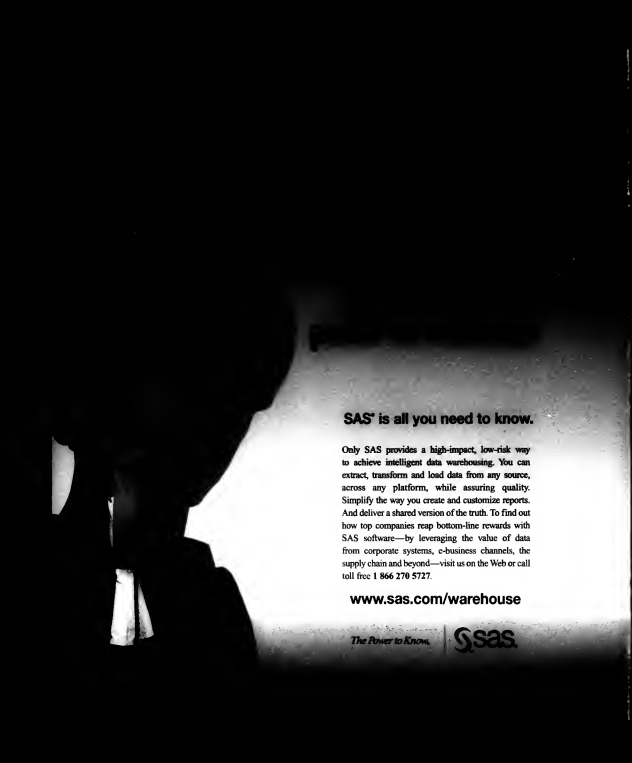

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OEPARTMENTS/RESOURCES

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ONLINE OEPARTMENTS

KNOWLEDGE CENTER SECURITY

65 Tips From Security Pros

It's a risky world out there. So we're providing scores of tips from IT security pros to help you protect your corporate assets.

PACKAGE BEGINS ON PAGE 23.

Thwarting Attacks on Apache Servers. In this book excerpt, a hacker explains how intruders can gain access to your system — and what you can do to stop them. QuickLink [illegible]

Social Engineering: A Matter of Trust. Securing a network isn't just the job of the "tech people," says columnist Douglas Schweitzer. QuickLink [illegible]

Tips for Securing Windows. Patches, service packs, hot fixes and quick fixes — when should you install them, and when might they make things worse? Spirian's CTO offers advice. QuickLink 39506

What's Inside a Hacker's Toolbox. Hackers have access to knowledge about 802.11 — wouldn't you like to know what they know? AirDefense Inc.'s Brian Moran takes a tour of a hacker's toolbox. QuickLink [illegible]

Password Secrets. Writing passwords in creative ways can make them easy to remember but difficult for anyone else to guess, writes columnist Peter H. Gregory. QuickLink [illegible]

AT DEADLINE

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Davis said most users will base their decisions on the whole IBM offering and an assessment of WebSphere. He said developers don't write to Linux directly, but rather to the J2EE platform, which, In IBM's case, is WebSphere.

"Obviously, people do care about the underlying hardware and the performance profile of the microprocessors," Davis said. "But I don't think many people are making decisions based solely on whether it's a Sparc chip, an Itanium chip, a Power chip. They're really looking at the entire package." ◗

WebSphere 5.02 for Linux/Power4-based pSeries and iSeries servers

EDITION	PRICE	AVAILABILITY
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SOURCE: IBM

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New language goes beyond compliance

BY JAIKUMAR VIJAYAN

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Its latest acquisition continues plan to diversify revenue

BY LUCAS MEARIAN

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JULY 2003: EMC purchases the rights to BMC's Patrol Storage Manager technology, which monitors and reports on usage of storage systems.

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BRIEFS

Microsoft Revamps Stock Awards Plan

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MARK HALL • ON THE MARK

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IBM Shifts Life-Cycle Management Focus

BY JAIKUMAR VIJAYAN

IBM will launch by year's end bundled Express versions of its product life-cycle management (PLM) software as part of a recently announced campaign targeting small and midsize manufacturing companies.

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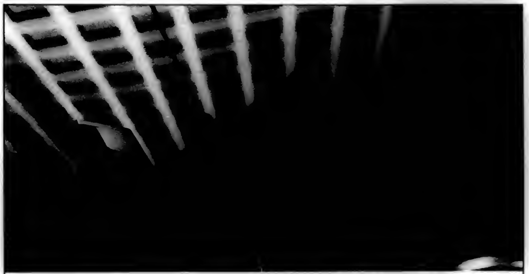

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Unisys Tunes JVM for ES7000

Provides Unix alternative by enabling Java applications to run on Datacenter

BY CAROL SLIWA

UNISYS CORP. today is making available a Java virtual machine (JVM) that it has specially tuned for its 32-processor ES7000 system running Microsoft Corp.'s high-end Windows Datacenter server operating system.

The Blue Bell, Pa.-based company claims that its new JVM — which will enable Java applications to run on Windows on the ES7000's Intel-based processors — will provide an alternative to Unix for independent software vendors and enterprise customers who need high-end, enterprise-class performance with Java.

But it's unclear how much appeal the JVM will hold for existing ES7000 customers, many of wbom are devoted Microsoft users.

"We are currently committed to Microsoft development, so the use of Java isn't currently entertained here," said Morris Koeneke, a database services manager at Addison, Texas-based Mary Kay Inc., which has several ES7000s.

Bob Crownhart, an IT director at Premera Blue Cross in Mountlake Terrace, Wash., said the health insurer doesn't run Java applications on its ES7000 or have any plans to do so. But he added that he has no problem with Unisys developing a JVM for the ES7000, as long as it's an optional elemeot.

Crownhart said be doesn't like to see Unisys depart from Microsoft's direction and would have concerns if Unisys shipped the JVM with the ES7000 and it affected the service packs or maintenance releases that Unisys ships.

"In those service packs, we'd have to look for any patches or hot fixes to that specialized [JVM], because you know they're not going to code it right the first time," Crownhart said. A "customized piece," sucb as the Unisys JVM, might "thwart uniformity," be added.

Gauging User Interest

Walt Lapinsky, director of strategic software at Unisys, said the new JVM can be downloaded at no charge. He said the company will consider shipping it with the ES7000 if interest is high.

The Unisys JVM has been available in bcta format for roughly a year, and a few customers and independent software vendors have used it, Lapinsky said. Unisys declined to provide the names of any beta testers.

NEW PRODUCT

Java on Windows

Windows Server 2003 Datacenter and Enterprise editions

Windows 2000 Datacenter Server and Advanced Server

Lapinsky said customers that are trying to consolidate servers for ease of management are unable to do so with their Java applications in the Windows Datacenter environment, so Unisys saw a need to provide a way to do that.

John Meyer, an analyst at Cambridge, Mass.-based Forrester Research Inc., said it made sense for Unisys to begin supporting Java as proactively as it does Microsoft, since Java on Unix has been the more credible platform for large-scale, back-office applications in the past two years.

Meyer said be thinks the trend will continue toward Intel-based systems hosting what Unix systems have traditionally been known for. Windows can be a viable operating system for deploying applications that need significant scalability, and users can do it at a lower cost than with Unix systems, be said.

But Meyer said Unisys will need to get application server vendors to support its JVM in order to have a viable offering. "Unless the other vendors support it, the uptake in the use of it for J2EE on the Unisys platform will probably be mucb less than what it has the potential for being," be said.

So far, there has been no indication of whether IBM and BEA Systems Inc., the leading Java application server vendors, will provide support. ◗

Group Led by IBM, Microsoft Releases User Identity Spec

Must converge with user-backed Liberty Alliance's work

BY CAROL SLIWA AND TOMMY PETERSON

The fifth of seven parts of a Web services security plan drawn up 15 months ago by IBM and Microsoft Corp. emerged last week. But it will have to be reconciled with work already done by the user-backed Liberty Alliance Project.

The newest specification, called Web Services Federation (WS-Federation), describes how to exchange user identity information among systems that rely on different security models. VeriSign Inc., BEA Systems Inc. and RSA Security Inc. helped IBM and Microsoft draft the specification, which will now be subject to a public review period of an undetermined duration.

Even though the 170-member-plus Liberty Alliance has focused on federated identity, the smaller group led by IBM and Microsoft said its efforts won't stand in conflict. The Liberty Alliance's membership extends beyond technology vendors to companies such as American Express Co., Bank of America Corp., General Motors Corp. and UAL Corp.

"We're anxious to work with them to find a way for them to take advantage of this key infrastructure," said Karla Norsworthy, director of dynamic e-business technologies at IBM.

Steven VanRoekel, director of Web services marketing at Microsoft, said the technology introduced in WS-Federation is "very complementary" to the Liberty Alliance's work. He said Liberty targeted the specific scenario of consumers opting to allow their information to be shared among corporations or service providers, whereas WS-Federation addresses the broader issue of federating multiple identity systems to one another.

"Right now, WS specs are underspecified, and Liberty specs are overspecified. It would obviously belp if people would get in a room and talk about it, but I don't know how soon that will happen," said Bob Blakley, chief scientist for security and privacy at IBM's Tivoli Software division. He also worked on the Security Assertion Markup Language standard that is key to the Liberty Alliance's work.

For its part, the Liberty Alliance welcomed the focus on federated identity and pledged to look at the WS-Federation specification once it goes to an open-standards body.

"Convergence of the two standards would benefit everyone, rather than having a holy war," said Slava Kavsan, vice president of engineering at RSA Security, which is a member of Liberty Alliance and has also worked with the IBM/Microsoft group.

Eric Norlin, vice president of strategic marketing at Ping Identity Corp., a Liberty Alliance member in Denver, noted that convergence wouldn't be unprecedented. He said the Liberty Alliance moved quickly to adopt relevant parts of the WS-Security specification once IBM, Microsoft and VeriSign turned it over to the Organization for the Advancement of Structured Information Standards (OASIS).

The authors of WS-Federation pledged to submit the specification to a standards body. No decision has been made about which one, but Norsworthy said OASIS is a "very likely candidate."

WS-Security, the first of the road map specifications to be published, went to OASIS in September. WS-Policy, WS-Trust and WS-SecureConversation, which were published in December, are still in the review stage and have yet to be submitted to a standards body. ◗

What WS-Federation Includes

Web Services Federation Language: Defines how different security systems broker identities, attributes and authentication among Web services.

Passive Requester Profile: Describes how federation mechanisms can be used by passive clients, such as Web browsers or Web-enabled cell phones, to provide identity services.

Active Requester Profile: Defines how federation mechanisms can be used by active clients, such as Web services and smart clients.

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Software Market Hit By Purchasing Delays

While vendors' financials fall short, users benefit from tough sales climate

IT SPENDING

BY STACY COWLEY

CITING PURCHASING delays stemming from the troubled economy, quite a few software vendors are already warning that the numbers will be grim when they release their financial results later this month for the quarter that ended June 30.

While PeopleSoft Inc. in Pleasanton, Calif., unexpectedly lived up to earlier forecasts despite pressure from Oracle Corp.'s hostile takeover bid, fellow enterprise applications maker Siebel Systems Inc. in San Mateo, Calif., warned for tbe second quarter in a row that it will miss its earlier guidance.

Houston-based systems management software developer BMC Software Inc. also fell short of expectations for its most recent quarter, as did all four of the major pure-play enterprise application integration vendors: Tibco Software Inc., WebMethods Inc., SeeBeyond Technology Corp. and Vitria Technology Inc.

Some Goods News

Even though most of this quarter's earnings warnings came from software companies, analysts said that the problems are concentrated in certain niches and that tbe software sector overall remains bealthy.

"I'm more looking at the glass as half-full. In general, I'm seeing a lot of buying," said Joshua Greenbaum, founder of Enterprise Applications Consulting Inc. in Daly City, Calif.

In the turbulent enterprise applications market, top vendors SAP AG, Oracle, PeopleSoft and Denver-based J.D. Edwards & Co. are all performing well, said Greenhaum, who added that he sees Siehel's string of rough quarters as a eompany-specific issue.

"Siebel wants to blame the economy for the trouble, hut I really think fundamentally they have some serious holes in their product strategy that are really coming home to roost," be said.

While other developers offer clients full portfolios of applications to handle a variety of corporate operations, Siebel has remained focused almost exclusively on CRM offerings. And that focus will continue to cost the company sales as customers increasingly seek integrated suites, he predicted.

Gartner Inc. analyst Tom Topolinski contends that Siebel's future isn't quite that bleak. All of tbe CRM vendors are adjusting to a market that will never again grow at the rate it did in the late 1990s, and none of them have yet perfected their formulas for generating sales in the new environment, said Topolinski, research director of Stamford, Conn.-based Gartner's worldwide software applications group.

The rate at which sales are declining has slowed, hut CRM vendors won't hit bottom and hegin to turn the corner toward growth until the third or fourth quarter of this year, he predicted. Gartner estimates that new worldwide CRM license sales declined 25% in 2002, to $2.8 hillion, and will fall another 16% in 2003 hefore finally picking up to a 1% growth rate in 2004.

With even the healthiest eompanies sensitive to the tough climate for software sales, the vendors' hane can be the customers' boon.

J.E. Henry, CIO at Knoxville, Tenn.-based movie theater operator Regal Entertainment Group, recently went shopping for a CRM system for Regal's Denver-based Regal CineMedia advertising subsidiary. After evaluating several vendors, Henry settled on PeopleSoft's technology as the hest match for Regal CineMedia's needs. But all of the vendors he talked with offered more flexibility than was common two years ago, he said.

"The software vendors are very open to negotiating, as far as pricing and contract terms," he said. "That tells you something about the market." ◗

Cowley is o reporter for the IDG News Service.

Revenue Roll Call

VENDOR	JUNE 02 QUARTER REV	JUNE 03 QUARTER REV
BMC Software	[illegible]	[illegible]
Computer Associates	[illegible]	[illegible]
Microsoft	[illegible]	[illegible]
Oracle	[illegible]	[illegible]
PeopleSoft	[illegible]	[illegible]
SAP	[illegible]	[illegible]
Siebel	[illegible]	[illegible]

NOTES: *Preliminary estimate from company management
**Consensus estimate of analysts polled by Thomson Financial/First Call
†Quarter ended May 31

House Cuts Pentagon's IT Budget

Lawmakers cite lack of oversight

BY DAN VERTON

The U.S. House of Representatives last week passed a defense spending hill that, if approved by the Senate, would significantly reduce investment in technology that's key to the U.S. Department of Defense's so-called transformation effort.

The House voted 399-19 to cut $320 million in IT spending across the operations and maintenance accounts of all four military services. The Navy and Air Force each lost $100 million in planned spending, while Army and departmentwide IT programs were each redueed by $60 million. The Pentagon had requested $28 billion in departmentwide spending on IT programs.

Officials from the Army, Navy and Air Force declined to comment last week on what one official from the Army CIO's office called pending legislation. The House and Senate must still hash out a compromise on the measure in a joint session.

However, in a report on the hill published July 2, the House Appropriations Committee said it was concerned about the continued growth of IT programs, especially operations and maintenance accounts. In addition, lawmakers said they have reservations about a "lack of oversight and management attention" given to many Pentagon IT programs.

> “[IT spending is] the last thing that should be cut, not the first.
>
> JAMES ADAMS, CEO, THE ASHLAND INSTITUTE FOR STRATEGIC STUDIES

"Over the last two fiscal years, the information technology hudget has increased over 15% in the operation and maintenance accounts," the report said. "While the Committee fully supports the transformational efforts of the department, the Committee continues to believe that the Department of Defense must be more effective in eliminating unneeded legacy systems and consolidating the large numher of disparate networks that are currently being maintained."

A senior staff member on Capitol Hill who spoke on condition of anonymity said the hasie reason for the reductions is the Pentagon's "lack of a eoherent strategy" when it comes to IT investments.

"We're not seeing a whole lot of effective program management either," said the staffer. "Until they get that right, how can they expect us to keep funding these programs at the levels they are requesting?"

A 'Warning Shot'

James Adams, founder and CEO of The Ashland Institute for Strategic Studies in Ashland, Ore., and a former IT adviser for the National Security Agency, said the cuts aren't so deep as to signal a major technology crisis for the Defense Department.

"Usually, these sums of money are warning shots," said Adams. "Still, It doesn't seem very rational to me. The requirement to make tbe services [fight more effectively as a team] is more investment in IT infrastructure, not less. You ean't effectively [integrate military services] unless you have a solid IT infrastructure. It's the last thing that should be cut, not the first." ◗

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While vendors' financials fall short, users benefit from tough sales climate

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"Siebel wants to blame the economy for the trouble, but I really think fundamentally they have some serious holes in their product strategy that are really coming home to roost," he said.

While other developers offer clients full portfolios of applications to handle a variety of corporate operations, Siebel has remained focused almost exclusively on CRM offerings. And that focus will continue to cost the company sales as customers increasingly seek integrated suites, he predicted.

Gartner Inc. analyst Tom Topolinski contends that Siebel's future isn't quite that bleak. All of the CRM vendors are adjusting to a market that will never again grow at the rate it did in the late 1990s, and none of them have yet perfected their formulas for generating sales in the new environment, said Topolinski, research director of Stamford, Conn.-based Gartner's worldwide software applications group.

The rate at which sales are declining has slowed, but CRM vendors won't hit bottom and begin to turn the corner toward growth until the third or fourth quarter of this year, be predicted. Gartner estimates that new worldwide CRM license sales declined 25% in 2002, to $2.8 billion, and will fall another 16% in 2003 before finally picking up to a 1% growth rate in 2004.

With even the healthiest companies sensitive to the tough climate for software sales, the vendors' bane can be the customers' boon.

J.E. Henry, CIO at Knoxville, Tenn.-based movie theater operator Regal Entertainment Group, recently went shopping for a CRM system for Regal's Denver-based Regal CineMedia advertising subsidiary. After evaluating several vendors, Henry settled on PeopleSoft's technology as the best match for Regal CineMedia's needs. But all of the vendors he talked with offered more flexibility than was common two years ago, he said.

"The software vendors are very open to negotiating, as far as pricing and contract terms," he said. "That tells you something about the market."

Cowley is o reporter for the IDG News Service.

Revenue Roll Call

VENDOR	JUNE '02 QUARTER REV	JUNE '03 QUARTER REV
BMC S[illegible]	[illegible]	[illegible]
C[illegible] A[illegible]	[illegible]	[illegible]
M[illegible]	[illegible]	[illegible]
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NOTES: *Preliminary estimate from company management
**Consensus estimate of analysts polled by Thomson Financial/First Call
†Quarter ended May 31

House Cuts Pentagon's IT Budget

Lawmakers cite lack of oversight

BY DAN VERTON

The U.S. House of Representatives last week passed a defense spending bill that, if approved by the Senate, would significantly reduce investment in technology that's key to the U.S. Department of Defense's so-called transformation effort.

The House voted 399-19 to cut $320 million in IT spending across the operations and maintenance accounts of all four military services. The Navy and Air Force each lost $100 million in planned spending, while Army and departmentwide IT programs were each reduced by $60 million. The Pentagon had requested $28 billion in departmentwide spending on IT programs.

Officials from the Army, Navy and Air Force declined to comment last week on what one nfficial from the Army CIO's office called pending legislation. The House and Senate must still hash out a compromise on the measure in a joint session.

However, in a report on the bill published July 2, the House Appropriations Committee said it was concerned about the continued growth of IT programs, especially operations and maintenance accounts. In addition, lawmakers said they have reservations about a "lack of oversight and management attention" given to many Pentagon IT programs.

> "[IT spending is] the last thing that should be cut, not the first.
>
> JAMES ADAMS, CEO, THE ASHLAND INSTITUTE FOR STRATEGIC STUDIES

"Over the last two fiscal years, the information technology budget has increased over 15% in the operation and maintenance accounts," the report said. "While the Committee fully supports the transformational efforts of the department, the Committee continues to believe that the Department of Defense must be more effective in eliminating unneeded legacy systems and consolidating the large number of disparate networks that are currently being maintained."

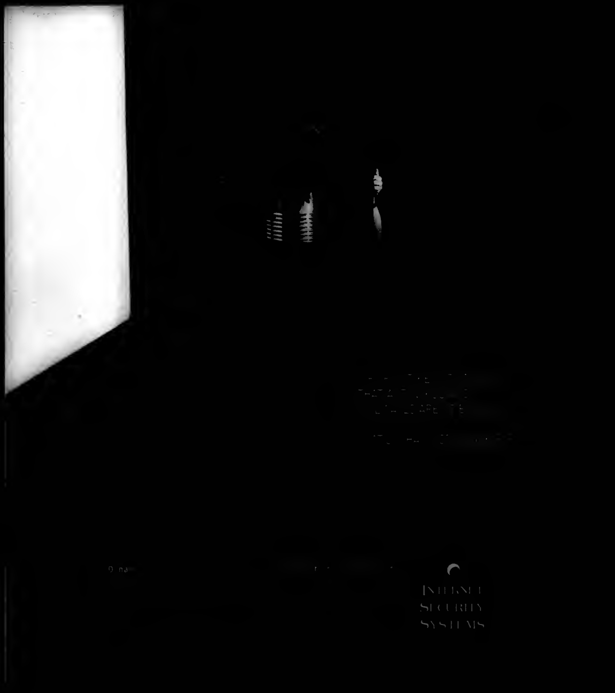
A senior staff member on Capitol Hill who spoke on condition of anonymity said the basic reason for the reductions is the Pentagon's "lack of a coherent strategy" when it comes to IT investments.

"We're not seeing a whole lot of effective program management either," said the staffer. "Until they get that right, how can they expect us to keep funding these programs at the levels they are requesting?"

A 'Warning Shot'

James Adams, founder and CEO of The Ashland Institute for Strategic Studies in Ashland, Ore., and a former IT adviser for the National Security Agency, said the cuts aren't so deep as to signal a major technology crisis for the Defense Department.

"Usually, these sums of money are warning shots," said Adams. "Still, it doesn't seem very rational to me. The requirement to make the services [fight more effectively as a team] is more investment in IT infrastructure, not less. You can't effectively [integrate military services] unless you have a solid IT infrastructure. It's the last thing that should be cut, not the first."



INTERNET
SECURITY
SYSTEMS

BRIEFS

HP Agrees to Buy Security Software

Hewlett-Packard Co. said it has agreed to buy Web-based user identity management software from Baltimore Technologies PLC in Hemel Hempstead, England. HP will pay about $13.6 million in cash for the SelectAccess technology, according to Baltimore, which is looking to sell off all its operations. The deal between the two companies is expected to be completed next month.

Symbol's Chairman Steps Down . . .

Symbol Technologies Inc. said Jerome Swartz has resigned as chairman and chief scientist of the Holtsville, N.Y.-based company, which is being investigated for accounting violations by the U.S. Securities and Exchange Commission and the U.S. attorney's office in New York. CEO Richard Bravman will serve as chairman until the maker of wireless devices and bar code scanners holds its annual shareholders' meeting in October.

. . . While Two Top Execs Exit Proxim

Proxim Corp., a Sunnyvale, Calif.-based maker of wireless LAN equipment, announced that Chairman Jonathan Zakin and Vice Chairman David King will both resign from its board and give up their positions as corporate officers. Proxim also said that it expects to report a loss of about $50 million on revenue of approximately $35 million for the second quarter.

Short Takes

Thomas Losica was named group vice president of global IT and business operations at AVAYA INC. in Basking Ridge, N.J. . . . INTEL CORP. said it has acquired WEST BAY SEMICONDUCTOR INC., a Vancouver, British Columbia-based maker of optical networking chips.

CA Event to Focus on Security, On-Demand Technologies

Software vendor expected to announce release of security portal at conference

BY MARC L. SONGINI

As it tries to cope with the continning lull in IT spending, Computer Associates International Inc. is expected to make big pushes on security and on-demand computing technology at its annual user conference this week.

Among the announcements expected at CA World 2003 in Las Vegas is the release of the company's eTrust Security Command Center software, a portal-based product that will let IT staffers centrally manage security applications from different vendors across a variety of systems. CA detailed its plans for the portal technology last September [QuickLink 32832].

[redacted]

CA officials declined to comment about other product developments that will he discussed this week. But based on the agenda for CA World, the vendor will also promote its efforts around Linux adoption and further detail its strategies for supporting on-demand computing and Web services technology.

For example, CA likely will announce new automated provisioning capabilities designed to let IT managers more fully exploit the network and server assets they have in their data centers, sources said.

The company made its initial foray into on-demand computing in late April, when it unveiled a set of six new or upgraded software products that can he used to dynamically allocate computing resources to specific applications as business demands change.

Rich Ptak, an analyst at Ptak & Associates Inc. in Amherst, N.H., said on-demand technology should help corporate users get improved payback from their existing IT infrastructures. CA's offering is focused on companies' need to rapidly install new applications, he added.

Electronic Theatre Controls Inc., a Middleton, Wis.-based maker of theatrical lighting equipment, uses CA's Unicenter systems management software. Mike Eckert, an enterprise automation specialist at the company, said his CA World plans include looking at CA's eTrust Intrusion Detection software as a tool that could "help filter what Web sites users can go see."

In addition, Eckert said he's interested in examining products that can help beef up Electronic Theatre Controls' virus-protection capabilities and investigating how Unicenter integrates with the overall eTrust product line.

Mike Stevenson, enterprise administrator at the Peel Regional Police data center in Brampton, Ontario, also plans to attend CA World. But Stevenson said that he's less interested in learning about specific product capabilities than he is in hearing about CA's overall strategic direction. The police agency is also a Unicenter user. ▶

Continued from page 1

Sarbanes

AMR Research Inc. in Boston. From an IT perspective, Section 409 "will cause the most heartburn" of all the Sarbanes-Oxley mandates, he said.

Jim Honerkamp, CIO at Clopay Corp., said officials at the Mason, Ohio-based building products maker "do anticipate a considerable amount of work" being necessary in IT because of Sarbanes-Oxley requirements like the ones spelled out in Section 409.

Honerkamp has already begun working with business executives and Clopay's auditors to define internal control processes for complying with facets of the new law, including Section 409. But he acknowledged that the company's IT department is "just starting" to focus on the software development, data security and consulting investments that will he needed.

MORE ONLINE

Standardized IT governance frameworks could help companies to comply with Sarbanes-Oxley

QuickLink 39817
www.computerworld.com

"Very little work is being done on Section 409," said Robert Handler, an analyst at Meta Group Inc. in Stamford, Conn. "Most of the work that is being done has been on Section 404."

That's the case at Globix Corp. Jameson Holcombe, senior vice president of operations at Globix, said the New York-based provider of managed IT hosting services currently is focusing on documenting its financial and accounting processes to meet the Section 404 requirements. Once that process is completed, which Holcombe expects to happen by mid-September, Globix officials plan to begin addressing the company's automation needs, including ones tied to Section 409.

Sarbanes-Oxley compliance efforts are complicated by the fact that much of the law's language "is so ambiguous," Holcombe said. "For example, what is 'material'?" He added that he hopes the SEC will publish specific guidelines for complying with Section 409 and other parts of Sarbanes-Oxley by September.

An example of a material event that may fall under the requirements of Section 409 is the loss of a major sales contract to a competitor, Handler said. Potential sales are often taken into account when companies make public revenue forecasts, he noted.

Cost overruns on IT projects and other major capital expenditures could also qualify as material events that need to he reported to interested parties within 48 hours.

Batch of Problems

The shift to a near-real-time computing environment could he particularly onerous for IT departments at big companies that rely heavily on batch processing, such as banks and telecommunications carriers.

Ulysses Knotts, CEO of CommerceQuest Inc., a Tampa, Fla.-based vendor of process-modeling software for Sarbanes-Oxley compliance, predicted that most big users will build hybrid batch and real-time reporting systems. "Show me a company worth more than $10 billion that's going to eliminate batch," he said. "They just can't do it."

> **"Very little work is being done on Section 409.**
>
> ROBERT HANDLER, ANALYST, META GROUP INC.

Data marts that extract information from transaction systems might provide some relief in reporting on material events, Knotts said. But most existing data marts have been built to meet planning or marketing requirements that have turnaround times longer than 48 hours, he added.

Handler said he's worried that many companies will procrastinate about taking steps to meet the Section 409 requirements. He drew an analogy between Sarbanes-Oxley and how businesses reacted to the Y2k problem. "We knew about it, then hemmed and hawed, and then reacted to it again with two years to go and scrambled," Handler said. ▶

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Hotel Goes Wireless With Voice/Data IP Net

Uses new SIP standard to offer voice and text messaging via wireless phones

BY MATT HAMBLEN

HOTEL Commonwealth in Bostoo opened last month with an IP network infrastructure that supports voice and text messaging to in-hotel wireless phones and other interactive applications for guests, all relying on the Session Initiation Protocol (SIP).

A few other U.S. hotels, including the Sheraton Sonoma County in Petaluma, Calif., have deployed combined voice and data IP networks. But Hotel Commonwealth's use of the emerging SIP interoperability standard appears to be a first in the hospitality industry, said Brian Riggs, an analyst at Sterling, Va.-based Current Analysis Inc.

Paris-based Alcatel SA last week announced that it provided the IP switches that support SIP at the heart of the hotel's network, plus its Alcatel Personal Wireless Telephony phones. Hotel Commonwealth guest rooms also have wireline IP phones that can receive text and graphical messages oo 3-by-3-in. screens. Those phones are made by Woburn, Mass.-based Pingtel Corp.

Timothy Kirwan, managing director of the independently operated hotel, said the IP voice and data technology was chosen over a traditional private branch exchange (PBX).

An IP-based system that supports SIP offers more flexibility for adding features or applications, and it "won't be obsolete in three to five years," Kirwan said. Cisco Systems Inc. was the other finalist for the switch deal, he added.

"We were very concerned about the intuitiveness of the technology," Kirwan said, since most hotel guests stay less than 48 hours and won't tolerate having to master complex products. But the IP devices appear to be catching on, he said, noting that he saw guests carrying Alcatel's wireless phooes oo the first day the hotel was open.

Riggs said the Hotel Commonwealth's network is the largest IP convergence project undertakeo by a U.S.-based hotel that he's aware of.

Alcatel's commitment to SIP was an important decisioo that adds a layer of standardization to the hotel's choice to go with IP technology, said Stewart Randall, principal consultant at Communications Design Associates Inc. in Norwood, Mass. Randall acted as the lead IT consultant on the project, starting in 1998.

SIP has yet to be formally ratified by the Internet Engineering Task Force. But the use of the technology frees Hotel Commonwealth to replace its Alcatel and Pingtel phones, if necessary, with other devices that support the standard, Randall said. In addition, other network devices and applications, such as point-of-sale or call accounting systems, should interoperate with Alcatel's OmniPCX Enterprise IP-PBX switches.

Randall said the hotel's IT infrastructure cost more than $1 million to set up. But despite its investments in the IP network, high-speed Internet access and other high-tech amenities, the hotel isn't tacking daily user fees onto its room rates, Kirwan said. ◗

[illegible] in Boston is believed to be the first [illegible] the hospitality industry to [illegible] SIP [illegible]

Continued from page 1

Wi-Fi

Wi-Fi links — or whether they should simply provide the Internet and e-mail access capabilities for free in the hope that increased sales of food, drinks and other products will more than offset the cost of the technology.

That issue is currently being weighed by McDonald's Corp., which last week launched a Wi-Fi pilot project at 75 restaurants in the San Francisco Bay area through a deal with Austin-based Internet access provider Wayport Inc.

Mark Jamison, vice president of business strategy and development at McDonald's, said the Oak Brook, Ill.-based company will use the San Francisco trial and similar ones in Chicago and New York to evaluate potential pricing models for the service and Wi-Fi technology's ability to attract customers.

Altogether, McDonald's plans to equip several hundred restaurants in the U.S. with Wi-Fi connections by year's end. Jamison said the fast-food chain is charging $4.95 for two hours of Wi-Fi access at the San Francisco locations, but customers who buy a meal can use the technology for free. If a free service tests best with potential users, then that is "the path to follow," he added.

Valencia Group, a Houston-based hotel operator, decided to offer free Wi-Fi access in all public areas in the luxury-class Hotel Valencia Santana Row, which opened last mooth in San Jose. Matthew Nuss, Valencia's executive vice president, said company officials view the Wi-Fi capability as a must-have amenity for guests.

"Wireless, in our opinion, is the next running water," Nuss said. "It's become part of the infrastructure of a hotel." The Valencia Santana Row installed seven wireless access points and pays about $2,000 per month for the 100MB/sec. pipe that supports the Wi-Fi service. Nuss said the service is well worth the IT cost because it helps the hotel attract technology-savvy travelers.

Schlotzky's Inc., an Austin-based operator of deli-style restaurants, currently offers free Wi-Fi service in 15 of its 600-plus restaurants. Monica Landers, a spokeswoman for Schlotzky's, said the chain started offering Internet access capabilities a year ago as a community service and quickly found that the technology paid off in terms of increased customer traffic.

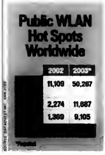
Twelve company-owned stores in the Austin area that offer Wi-Fi service each pull in an extra 23 customers daily on average, Landers said. She added that customers spend an average of $6 each per visit, so Schlotzky's easily gets a payback on the $300 a month it pays to run a T1 line to a restaurant. At a meeting this week, Schlotzky's officials plan to encourage franchisees to add Wi-Fi service in their restaurants.

VIA Rail Canada Inc., which operates passenger trains throughout Canada, last week kicked off a four-mooth test in which it will offer Wi-Fi access on some trains between Montreal and Toronto.

Guy Faulkner, product manager for corridor services at Montreal-based VIA, said the railway won't charge for the service during the trial. But VIA will ask passengers what they would be willing to pay for Wi-Fi access, he said.

Seattle-based Starbucks Corp. launched Wi-Fi service in its U.S. cafes last August and now offers access in about 2,000 locations. Users have to sign up for the service with Bellevue, Wash.-based T-Mobile USA Inc., whose prices start at $19.99 per month.

Lovina McMurchy, director of Wi-Fi business and alliances at Starbucks, said the company plans to stick with that approach. But she added that Wi-Fi hot-spot deployment is "a learning experience" for businesses and said it's hard to tell how different pricing plans or free services will play out. At this point, a lot of companies are still just "dabbling" in Wi-Fi through pilot projects, McMurchy said. ◗



Public WLAN Hot Spots Worldwide

	2002	2003*
[illegible]	11,109	50,287
[illegible]	2,274	11,687
[illegible]	1,369	9,105

*Projected

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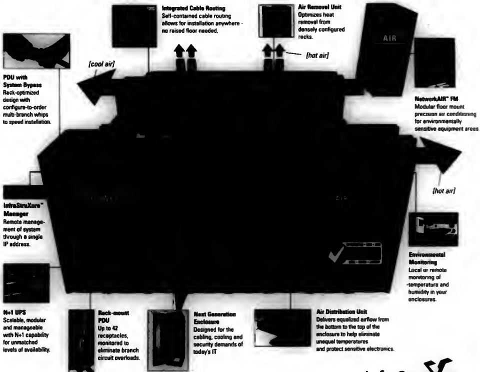

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MARYFRAN JOHNSON

Dog Days of Unix?

THE FORTUNES and misfortunes of Unix have always fascinated me, and honestly, I consider this something of a personal problem. Like voting for Democrats or trying to house-train a dachshund (both clearly wasted efforts).

I trace my Unix affliction back more than a decade to my days as a *Computerworld* reporter, when I was covering the piteous struggles of the so-called Unix desktop wars. My side lost quite spectacularly to the Microsoft monopoly. It was a clear defeat for open systems and a decisive win for Windows, the most proprietary operating system on earth.

Fast forward to today, and Unix is once again under siege, routinely derided as "proprietary" by, of all people, the Wintel crowd. But the most surprising attack is coming from a boisterous little Unix cousin with the same digital DNA twisting around its code and a cuddly penguin for a mascot. Linux, running on Intel boxes, is swarming the enterprise at the low end, bumping off the big-dog Unix variants (Sun Solaris, HP-UX and IBM's AIX) almost as often as it routs Windows NT.

Linux is impressing IT with its compelling cost savings and solid performance, supported by a rising chorus of rabid fans among developers and all the major systems and software vendors.

So, is Unix really doomed this time? Is it too late to adopt an adorable mascot — a dachshund, perhaps? We answered that question (not the mascot part, but the doomsday scenario) on our front page last week [QuickLink a3360]. And we confirmed that Unix is far from being the guest of honor at any farewell parties.

Unix remains essential to the most powerful applications in corporate enterprises, says our survey of 291 IT managers and users. When asked how reliant their companies are on Unix, 77% of our respondents said "extremely" or "very" reliant. More than half (56%) said Unix would indefinitely own the high end, while another 24% saw its importance declining but not disappearing.

In another two dozen interviews, corporate users told us that while they love the economics of Linux on Intel at the low end, they're acutely aware that it's still years away from the power, scalability, stability and support their data centers require. The moving-target nature of Linux distributions — that rapid evolution of the code base that open-source devotees brag about — is hardly a selling point for high-end business applications today.

And real money is still being spent on Unix. Last year, businesses and governments worldwide spent nearly $21 billion on Unix servers and $13.9 billion on Windows, but only $2.8 billion on Linux, reports IDC. Over the next five years, however, IDC analysts expect Unix to crawl along, growing less than 3%, whereas Linux will be racing its engines, growing more than 200% to an eventual $8.8 billion market.

Listening to the Linux vendors, I have to admire their marketing spin as they denigrate Unix for its multiple versions (which they have in abundance) and make giddy predictions about "Linux everywhere" (a phrase borrowed from Bill Gates' playbook?).

In reality, the foreseeable future is a three-way race between Unix, Linux and Windows — with Linux more likely to outrun Windows at the high end than Unix. But regardless of how this race plays out, it has only benefits for IT managers. Robust competition ultimately drives prices down and choices up. Oh, and if anybody wants to try outmarketing that beguiling penguin, I've got a very winsome dachshund I'd like to get out of the house more often. ◗

THE LATEST HARVARD BUSINESS REVIEW SAYS THAT BECAUSE EVERYONE HAS PENS AND PENCILS, DRAWING DOESN'T MATTER ANY MORE. TOUGH LUCK, HUH, MR. da VINCI?
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PIMM FOX

Microsoft, Lead the Spam War!

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The technology industry's get-tough policy on a pernicious problem: spam.

Back in May, the Senate Committee on Commerce, Science and Transportation held hearings on spam. In written testimony, Microsoft Chairman Bill Gates didn't say much about improving government regulations, tightening existing laws or beefing up enforcement talent at the Federal Trade Commission. Nor did he explicitly support Virginia legislation (signed in April) that has made it a felony to send unsolicited bulk e-mail containing falsified routing information. Virginia's law goes further than the antispam statutes in 25 other states by permitting felony prosecutions and seizure of assets.

Instead, Gates — who says he hates spam — offered up a dose of research and marketing. Sure, the announcement of a 20-person Microsoft team to work on spam is good news, but it falls far short of what's needed. (Note that the company's security team didn't get very far in a year.)

The only way to grab hold of this marketing gone berserk is to also hold Internet service providers financially liable — and make the penalties for spammers onerous enough to thwart their business plans. Think millions!

Telephone companies (prodded by the 1991 Telephone Consumer Protection Act) have blocking technology to combat telemarketers. Surely, Microsoft and IBM aren't technology laggards. Gates should lead the technology charge to remove from Outlook and Exchange advertisements for bigger penises, get-rich-quick schemes and

SIMPLIFY, SAVE,

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CIO

Intel Alliance Profile:
Hewlett-Packard

operational costs by not having to hire people needed to support multiple platforms This all contributes to an impressive bottom line in an industry where competitors increasingly bleed red ink. JetBlue grew 63 percent in the first quarter of 2003 Part of that growth easily can be attributed to smart IT spending

"When JetBlue considers a server solution, we have three important criteria scalability, manageability and availability," says airline Vice President/CIO Jeff Cohen "In these areas, [Intel] has been very good to us"

Of course, you needn't be a high-flying startup to benefit from efficient, economical and reliable systems At a time when IT budgets remain constrained by the weakened economy, IT leaders throughout the industry are increasingly turning to the same scalable solutions, for the same solid business results, that have fueled JetBlue's success.

COMMON CHALLENGES, UNIQUE SOLUTIONS

Operating costs Maintenance Infrastructure upgrades. These are among the top challenges for IT leaders who struggle to minimize new spending—while also consolidating and/or upgrading back-end servers to maximize front-end business processes. It's almost a Catch-22, this notion of simultaneously controlling costs while unleashing new computing power and delivering greater business value Yet companies such as T Rowe Price, Monster and NASDAQ have met these objectives by building their systems upon flexible, scalable and reliable Intel architecture-based computing platforms Among the business benefits these companies have gained through smart investments:

Competitive Advantage (see "Successfully Managing Rapid Growth at Monster")

Simplified IT Environments less costly to maintain (see "Server Consolidation at T. Rowe Price")

Greater Productivity and Enhanced TCO (see "Powering the Enterprise at NASDAQ")

Like business/IT leaders everywhere, Doug Busch, vice-president/CIO at Intel, struggles with the same daunting business and technology challenges And like his peers, Busch strives to do more than just maintain his firm's technology status quo—he's also building for the future To achieve these goals. Busch and his IT staff have put their own Intel®-based server innovation to work, and the investment has paid off in ways that also benefit Intel's customers.

Since 1999, Busch and his team have achieved huge savings by transitioning the company's 16,000-server global computing environment to server solutions based on the Intel® Xeon™ processor family. And with the anticipated cost savings from Itanium® 2-based servers, Intel's IT infrastructure will run on complementary platforms that deliver better business results faster and more cost-effectively than their predecessors or competing architectures.

"Given that newer platforms become faster and less expensive over time, the way we approach a server upgrade is to start with a clean sheet of paper," says Busch, who oversees Intel's 4,000-person global technology unit. In advising customers how to achieve greater computing power and costs savings in their own enterprises, Busch recommends the same methodology he employed: **1. Assess** your company's computing requirements; **2. Evaluate** computing price/performance trends; **3. Calculate** the Total Cost of Ownership (TCO) of a refresh; **4. Compare** the TCO of a refresh to the cost of simply buying more of what's already in place—including hardware, software licensing and operational expenses.

Typically, a refresh provides a lower cost structure, Busch says, and enables IT departments to build a scalable, man-

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>> For databases <4-16 gigabytes of memory

>> Broad ecosystem of standard solution providers

>> Broad deployment enhances interoperability across platforms

>> Runs thousands of applications

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ageable IT infrastructure for the future. With the Intel Xeon processor MP and Itanium 2-based platforms, Intel and its customers gain the ability to scale out and up—functionality that delivers the business benefits detailed above.

To provide customers with the computing platforms necessary to achieve these business benefits, Intel poured over $9.5 billion into R&D and manufacturing innovation in fiscal year 2002. Much of this investment went to enrich the Intel Xeon processor family and fuel the emergence of complementary Intel Itanium 2 processors (see boxes, p. 3 and p. 4).

THE ROI OF ARCHITECTURE INVESTMENT

Intel's R&D investment might seem counterintuitive to cost-conscious IT leaders, but industry analysts say forward-thinking companies are on the right track to reap business value from continued investment in server infrastructure. "Companies under-invest in technology at their peril—even in lean times," reports worldwide management consultancy McKinsey & Co. "New technology, deployed intelligently, can help organizations make dramatic leaps in productivity and redefine competition within [entire] sectors."

Enterprise architecture expenditures are an especially smart investment in future business benefits, says Jeffrey Hewitt, principal analyst with Gartner Inc.

"As worldwide economies begin to show recovery, server infrastructure improvements will come back into the picture because companies seek to stay competitive and upgrade aging hardware platforms," Hewitt says. The server market segment's return to growth will be fueled primarily by Intel on the processor front and by Windows* and Linux* from an OS perspective, he adds.

These market trends and independent analysis point to a common conclusion: IT leaders must meet today's common business challenges—and tomorrow's—by investing in flexible, scalable, interoperable technology solutions. The unpleasant alternative is to risk falling behind in the race to generate new business value and drive innovation.

POWERFUL PLATFORMS = PEAK PERFORMANCE

It isn't just about the infrastructure. Intel Xeon processor MP and Itanium 2 processor computing engines fuel more than a stronger, increasingly versatile IT

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>> For databases >4-16 gigabytes of memory

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>> Choice of operating systems, including Windows Server 2003, HP-UX and Linux. Optimized applications suitable for manufacturing, scientific, energy and financial services solutions

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foundation They also enable companies to gain new business process efficiencies, streamlining business functions and enhancing employee productivity

Business leaders realize that an advanced IT infrastructure can help extend their competitive advantages in key areas and, when coupled with improved processes and capabilities, drive innovation and new opportunities

"As anyone on the Web knows, continuous enhancement is critical to attracting visitors and staying competitive," says Brian Farrey, president of TMP Technologies, a division of Monster Worldwide, which manages technology resources for its parent company (host of Monster.com) "The [Intel architecture] gives us more options and much faster development times when enhancing our site"

Among the principal business benefits enabled by Intel's evolving platforms:

Improved Online Transaction Processing and CRM: Intel Xeon processor MP-based platforms are ideal for mid-tier business critical applications, helping companies in all industries streamline business processes. Among the business results enabled by Intel Xeon processor MP-based platforms: improved customer relationship management, collaboration and business intelligence

Maximized Databases, ERP, SCM and High-Performance Computing: The Intel Itanium 2 processor is uniquely designed for the most demanding, data-intensive enterprise applications These high performing computing engines enable businesses to deploy their highest-end enterprise applications (e g large databases and business intelligence) on cost-effective Intel-based servers, instead of those based on RISC architectures.

Intel in Actio[illegible]

Powe [illegible] t

Ente [illegible] c

NASDAQ

Itanium 2-based servers provide faster data analysis and high availability in such industries as finance manufacturing, energy and life sciences

Enhanced Business Performance, Reliability Two new Intel products the Intel® Itanium® 2 processor with 6M L3 cache, and the Intel® Xeon™ processor MP at 2 80 GHz/2MB only improve upon the business results detailed above

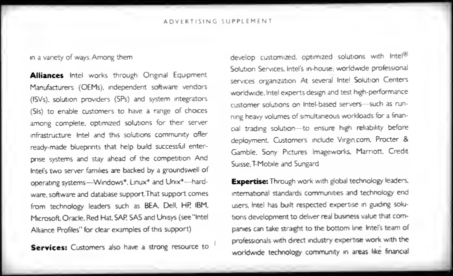
With core frequency doubled to 1 50GHz and the L3 cache doubled to 6MB new Itanium 2-based platforms are the ideal solution for compute-intensive, high-end enterprise applications. With production software available today from Oracle, Microsoft and IBM, businesses can now deploy back-end databases on Itanium 2-based servers. Moreover, the new Itanium 2 processor with 6M L3 cache maintains full hardware and software compatibility with previous Itanium 2-based systems. Also, all Itanium 2 processors today offer support for IA-32 applications, a new technology called the IA-32 Execution Layer will further enhance this capability in 2H '03

Meanwhile, the new Intel Xeon processor MP at 2 80 GHz/2MB cache is designed to increase performance levels for mid-tier server applications that demand large amounts of cache for frequent data access cycles. These new levels of speed and scalability are ideal to support robust CRM and SCM applications, allowing real-time access to information or fast data consolidation and analysis to support immediate opportunity identification—to cross-sell or up-sell for example—and business decisions

INDUSTRY LEADERSHIP

Intel's industry leadership isn't just a marketing pitch, it's an operating philosophy to ensure that technology solutions address real-world business challenges facing specific industries Intel drives and jointly develops these solutions

Intel Alliance Profile: Orac



in a variety of ways. Among them

Alliances Intel works through Original Equipment Manufacturers (OEMs), independent software vendors (ISVs), solution providers (SPs) and system integrators (SIs) to enable customers to have a range of choices among complete, optimized solutions for their server infrastructure. Intel and this solutions community offer ready-made blueprints that help build successful enterprise systems and stay ahead of the competition. And Intel's two server families are backed by a groundswell of operating systems—Windows*, Linux* and Unix*—hardware, software and database support. That support comes from technology leaders such as BEA, Dell, HP, IBM, Microsoft, Oracle, Red Hat, SAP, SAS and Unisys (see "Intel Alliance Profiles" for clear examples of this support).

Services: Customers also have a strong resource to develop customized, optimized solutions with Intel® Solution Services, Intel's in-house, worldwide professional services organization. At several Intel Solution Centers worldwide, Intel experts design and test high-performance customer solutions on Intel-based servers—such as running heavy volumes of simultaneous workloads for a financial trading solution—to ensure high reliability before deployment. Customers include Virgin.com, Procter & Gamble, Sony Pictures Imageworks, Marriott, Credit Suisse, T-Mobile and Sungard.

Expertise: Through work with global technology leaders, international standards communities and technology end users, Intel has built respected expertise in guiding solutions development to deliver real business value that companies can take straight to the bottom line. Intel's team of professionals with direct industry expertise work with the worldwide technology community in areas like financial

Intel in Action

Intel Alliance Profile: [illegible]

Featuring SQL Server 2000 [illegible] Edition†

[illegible]

services, manufacturing, retail, government and communications This is done to ensure that Intel's technology is put to work delivering strong ROI, lower TCO, and meeting specialized industry needs

McKinsey & Co recently singled out Intel for its success in delivering solid business results "Intel has concentrated on new higher-value goods, thereby generating extraordinary productivity advances as microprocessors and memory chips become exponentially more powerful though not exponentially more expensive"

And, as shown in customer case studies such as JetBlue, Intel's powerful products, solutions and expertise are driving dramatic new business solutions—and value—across several key industries

By taking JetBlue's lead—by making smart investments in enterprise architecture—well-established industry leaders find that they, too, can deploy critical business applications that can be described just like the upstart start-up's

Efficient, economical and reliable

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Performance tests and ratings are measured using specific computer systems and/or components and reflect the approximate performance of Intel products as measured by those tests Any difference in system hardware or software design or configuration may affect actual performance Buyers should consult other sources of information to evaluate the performance of systems or components they are considering purchasing For more information on performance tests and on the performance of Intel products visit http //www.intel.com/performance /resources/limits.htm

The Intel Xeon processor MP and the Intel Itanium 2 processor may contain design defects or errors known as errata, which may cause the products to deviate from published specifications Such errata are not covered by Intel's warranty Current characterized errata are available on request

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The McKinsey Quarterly Newsletter May 6 2003

Source http://www.tpc.org/ As of May 20 2003 HP Superdome* 707 102 tpmC $9 130/tpmC with 64 Intel Itanium 2 processors at 1 5 GHz each with 6MB iL3 cache running Microsoft Windows* Server 2003 Datacenter Edition and Microsoft SQL Server* 2000 Enterprise Edition 64-bit with 256 GB RAM available 10-23 2003

† Results and information are reported by end user or vendor and not verified by Intel Results may not be representative and may vary Buyers should consult other sources of information to evaluate the performance of systems or components they are considering purchasing

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cheap credit cards. Many e-mail programs can filter junk. Shouldn't ISPs also have the technology to block spam from ever reaching their outgoing servers?

So what's behind the foot-dragging by Gates and Microsoft? Well, any punitive action or technology requirement targeting ISPs would certainly affect Microsoft's Hotmail, MSN and bCentral online services. Also, Microsoft doeso't like being told what to do — especially by the government. The company's responses to spam have included stumping for best practices, mediating customer disputes and waiting until independent trusted authorities can certify legitimate e-mail solicitations. But where's the clout? Without the threat of financial pain, what's to prevent spammers from moving to another domain, enlisting better technology or ignoring these nongovernmental lobbies altogether?

There's lots of money behind the notion of certifying good online marketers and weeding out the baddies. By being able to slice and dice the online audience, Microsoft will be able to fence-sit this issue: It can create antispam teams (and publicity) while simultaneously reaping the rewards from "good" online marketers.

But there's one major problem with attempting to label good online marketers with a seal of approval: Who, I wonder, would wield that rubber stamp? ◗

DAVID MOSCHELLA

Consolidation Claims Lead To FUD

IN MY COLUMN last month [QuickLink 38788], I argued that a simple trip to the dictionary should be enough to remind us that IT isn't a mature industry, no matter how fashionable it has become to claim otherwise. Similarly, much of the rationale for Oracle's ongoing efforts to acquire PeopleSoft has been based on an equally dubious claim: that the IT industry is consolidating.

I have been researching, analyzing and forecasting the IT marketplace for most of the past 25 years, and for the great majority of this time, people have been either predicting the imminent consolidation of the IT supplier base or claiming that it's already under way. Yet somehow during this time, the oumber of significant companies in the IT industry has continued to grow rapidly, from perhaps a hundred in the late 1970s to literally thousands today.

The consolidationists have got both their numbers and their analogies wrong. Most readers have probably heard, for example, that there were once more than a hundred automakers, whereas today there are roughly a dozen. But too often, no one mentions that while the oumber of car manufacturers has fallen, the number of companies that are part of the global automobile industry has soared into the hundreds of thousands. The same pattern is proving true for the IT business.

Our exaggerated sense of IT industry consolidation stems from relatively narrow and short-term thinking. Clearly, many IT markets have followed a pattern that eventually results in fewer, more dominant suppliers. A handful of start-ups might launch a new sector, but as the market expands, it creates both the revenue opportunities and specialized customer needs that attract new entrants. However, just as trees don't grow to the moon, this expansion inevitably slows, and the number of participating companies shrinks. We have seen this pattern with mainframes, minicomputers, PCs, storage devices and many software and networking products.

But this consolidatioo within existing segments has always been more than offset by the creatioo of new markets and the ever-expanding services that support them. Whether ooe is looking at hardware, software or networking, the result has beeo an increasingly fragmented IT industry. As silly as it seems today, many informed people were once deeply worried about how IBM, AT&T and "Japan Inc." would eveotually dominate an overly consolidated IT business.

All of this is being repeated with Oracle/PeopleSoft. Larry Ellison is certainly right that some consolidation in today's bloated enterprise software business is likely, and even desirable and that large mergers and acquisitions will inevitably be part of this process. Just look at the consolidation within the database market over the past 10 years. But as in the past, the assertion that the overall software business will also consolidate into a few big players will be proved wrong. Future innovation and specialization will assure that this won't happen.

Misleading claims of maturity and consolidation matter much more than might be initially apparent. To the extent that customers adopt these inaccurate views, they will develop an unnecessary bias toward not just Oracle, but all of the software industry's largest players. Thus, Ellison and others have a strong incentive to promote what is ultimately a self-serving idea. But it's mostly just a semi-sophisticated form of fear, uncertainty and doubt and should be viewed and treated as such. ◗

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READERS' LETTERS

Security Risk Is a Phantom Menace

IT'S SAD to see IT and security managers struggling to measure and manage security risk ["IT Managers See Need for Risk Metrics," QuickLink 38973]. I have conducted research for 35 years, interviewing more than 200 computer criminals, and I concluded long ago that as long as security remains imperfect, security risks (expected frequencies of adversities, not to be confused with business risks) aren't measurable in most cases because they're created by and under the control of our unknown enemies.

As noted in the article, there are insufficient loss statistics applicable to specific organizations on which to base valid risk assessments. Therefore, security risk can't be measured, controlled or managed. As Carl Cammarata rightly said in the article, "You can't manage what you can't measure."

The old, negative risk-reduction objective should be replaced with a positive one of achieving due diligence and good practices. It's more important to meet increasing regulatory and legal requirements and comply with standards.

We should use the good safeguard products and services provided by the multibillion-dollar security industry and benchmark relative to our common body of knowledge and the practices of well-secured, similar organizations.

By using these practical due diligence methods, we avoid negligence and more likely serendipitously reduce both the known and unknown risks created by our unknown enemies.

Donn B. Parker, CISSP
Los Altos, Calif.

Makes Sense

ROBERT L. SCHEIER'S "Surviving Software Upgrades" [QuickLink 38227] was an excellent common-sense article. Articles such as these will help the IT specialist to work more effectively with business owners and upper-level management.

Kris Molitor
Consultant, Rockford, Ill.

Finding Time for IDS

CONTRARY to Gartner's position, I find intrusion-detection systems to be very valuable ["IDS Criticisms Kindle Debate," QuickLink 39336], assuming you have someone who understands IDS and the network and who can analyze the captures. At my company, we have hundreds of examples of hack attempts and network problems that were resolved thanks to our IDS. This makes it worth it for us. Firewall traffic analysis isn't sufficient: Gartner's own statistics show that most hack attempts are by internal users. Organizations that can't dedicate time to operate an IDS shouldn't buy one.

Corey Whelpley, CISSP
Santa Ana, Calif.,
corey_adam@hotmail.com

Engineering the Corporation

THE PROBLEM with reengineering can be found in the word itself ["Reengineering Revisited," QuickLink 38981]. The "re" implies that companies have been engineered in the first place. I love business, and I think business-process engineering is a wonderful idea, but as an engineer, I find the term *reengineering* insulting. Why don't we just call it business engineering? If something falls off of a wagon, we can't refer to it as "engineered." It simply exists.

Kirk J. Gould
Phoenix, gouldkj@juno.com

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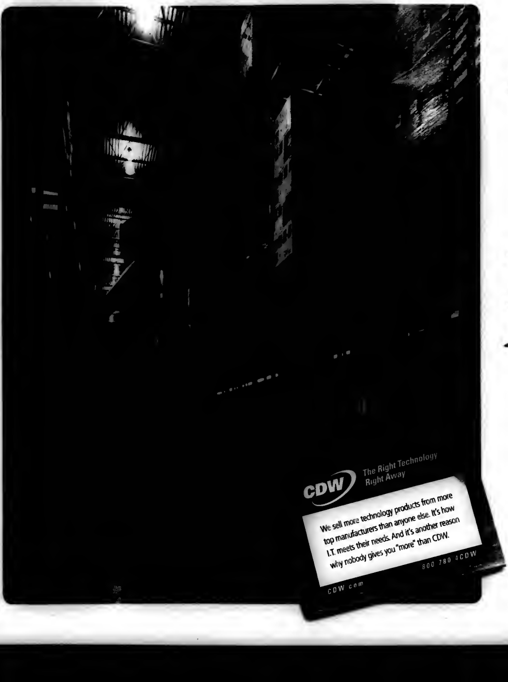

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Know Thy Users

With the proper ideotity managemeot system, you can save mooey, make users happy and improve your IT security. Here are strategies for making the right choices from users like Ann Garrett (left), chief informatioo security officer for the state of North Carolina. Page 30

Strengthen Security During Mergers

With merger and acquisitioo activity on the rise, users like Bobby Gillham (left), manager of global security at ConocoPhillips, offer advice oo how to protect your company's assets and bolster security at the combined business. Page 36

EDITOR'S NOTE

RISK IS EVERYWHERE. Just stepping out your froot door in the morning involves some risk. So does staying inside with the furniture.

As author Bill Bryson points out, government figures show that more than 400,000 people in the U.S. are injured by chairs, sofas and sofa beds in the course of a year. How do they *do* it? Mind you, we're talking about injuries that require a trip to the emergency room. That's about 10 times more than the oumber of people injured by skateboards, trampolines or scissors!

Of course, it's no surprise to you that risk comes in many forms. In the field of IT security, the threats include disgruntled employees, fired employees, clueless employees who succumb to social engineering, passwords left oo Post-it notes, wide-open instant messaging and increasingly powerful hacker tools in the hands of teenagers.

This special report has dozens of tips to help you manage those risks. But before you implement any of them or buy another security product, do one thing: Stop to ideotify the three biggest security risks your company faces — whatever would bring your company to its knees. They will vary, depeoding oo your industry and business model. Is it theft of credit card oumbers? Embezzlement? Privacy violations?

Be sure to address those high-risk areas first, before looking at more exotic problems. Take care of the basics: passwords, patches, employee training, antivirus software and access controls. If you can't keep up, consider outsourcing.

And don't stub your toe on the furniture. ▶

Mitch Betts is Features editor at Computerworld. *He can be contacted at mitch_betts@computerworld.com.*

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MARIA RENDON

Sage advice for protecting corporate assets in a dangerous world.

I want
every
employee
in every office
to have
easy access.

The Story So Far

An all-too-successful computer experiment eventually spawns the antivirus software industry. By Frank Hayes

FRED COHEN ALREADY knew about worms, Trojan horses and hackers in November 1983. But as a graduate student participating in a weekly seminar on computer security, Cohen was interested in a new class of security threats: a program that reproduced itself by attaching to other programs. It took eight hours for Cohen to create his virus and nearly a week to get permission to test it on a large Unix computer at the University of Southern California.

And the virus worked frighteningly well. During each of five tests, the virus infected files and gained full system rights on the machine in less than an hour — in one test, it took less than five minutes. After that, USC systems administrators banned all further security experiments on their computers.

Other computer security threats had been around for two decades, since the early days of time-sharing. Defenses against them were mostly ad hoc and used on systems only after they had been attacked. But viruses, which spread largely through desktop PCs, would prove to be the threat that turned computer security into an industry.

By 1986, viruses were attacking IBM PCs and Apple II computers. In 1988, the first Macintosh virus appeared, and so did the first commercial antivirus software.

But in 1989, the problem was large enough that IBM sent antivirus software it had developed for internal use to large customers, along with a letter explaining what it was for. Suddenly, large companies were thinking about computer security — and antivirus software became big business.

But viruses weren't the only threat. In November 1988, a worm program released on the Internet infected 6,000 servers — 10% of Internet host machines at the time — and crippled the network for days.

In the wake of the worm, the U.S. Department of Defense set up the Computer Emergency Response Team (CERT) Coordination Center at Carnegie Mellon University in Pittsburgh to improve communication about future incidents. In 1989, the Department of Energy set up its own Computer Incident Advisory Capability at Lawrence Livermore National Laboratory.

In 1990, security researcher Eugene Spafford at Purdue University coined the term *firewall* for a system that would protect individual networks from threats such as worms. One of Spafford's students, Daniel Farmer, developed the Computer Oracle and Password System (COPS), the first publicly available security scanner.

And in 1991, the first commercial security firewall was set up for Du Pont Co. by Digital Equipment Corp. Digital adapted its own corporate firewall to create the product.

But by the mid-1990s, protection from outside threats was no longer enough. E-commerce required protection while information was traveling across the Internet. Netscape Communications Corp. developed the Secure Sockets Layer (SSL) standard in 1994 to add automatic encryption and authentication to TCP/IP.

The same year, two developers at Enterprise Integration Technologies, Eric Rescorla and Allan M. Schiffman, created the Secure Hypertext Transfer Protocol, which allowed individual HTTP messages to be encrypted, signed or authenticated.

In 1998, attacks on Web sites and other government systems spurred the Department of Justice and the FBI to create the National Infrastructure Protection Center (NIPC), a joint effort by the government and private sector to prevent both physical and cyber attacks on computer networks.

Security concerns soared as the year 2000 approached, and "chief security officer" became an executive title at as many as half of large companies (though CSOs had been around as early as 1996). Microsoft Corp. appointed its own CSO in 2002, and after an embarrassing string of security holes in its products, stopped all new programming for a month to retrain its programmers and examine old code for security problems.

In the nearly two years since the terrorist attacks of Sept. 11, 2001, security has been a top IT priority — at a time when budgets are tighter than ever. And corporate IT security people will need to use existing resources, tap existing knowledge and, most of all, avoid reinventing the wheel if they want to squeeze the most out of every dollar.

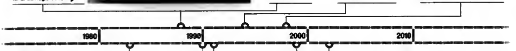
And now, on with the story.... ▶

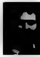
1988: After **Robert Morris'** worm program cripples the Internet for days, the Defense Department sets up the CERT Coordination Center at Carnegie Mellon. ▶

1988: Dr. Alan Solomon creates the first widely used antivirus software.

1994: The SSL standard developed by Netscape adds encryption and authentication to TCP/IP.

1998: The government establishes the NIPC to counter physical and cyberattacks against the Internet.





◀ **1983:** Security researcher **Fred Cohen** demonstrates the first documented experimental virus at the University of Southern California.

1990: Daniel Farmer develops COPS, the first publicly available security scanner.

◀ **1990:** **Eugene Spafford** coins the term *firewall.*

1991: Du Pont installs the first commercial security firewall.

1999: Chief security officers are appointed at nearly half of companies with more than $1 billion in revenue.

2002: Microsoft stops all coding for a month to retrain programmers and examine old code for security problems.

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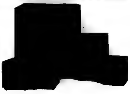

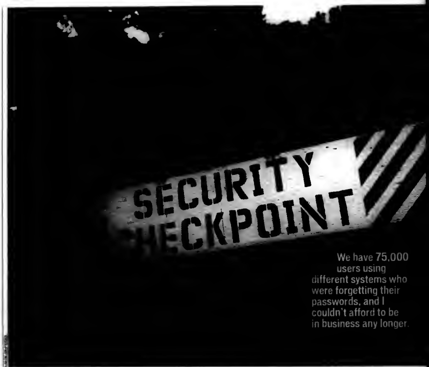

We have 75,000 users using different systems who were forgetting their passwords, and I couldn't afford to be in business any longer.

With the right identity management system, you can save money, make users happy and improve your IT security. Woe to those who ignore it. By Deborah Radcliff

Know T

YOU'VE GOT thousands of employees tapping into a dozen internal enterprise applications apiece, a growing base of external business partners and a slew of customers visiting your new portal. You need to give this fluid population the right channel for reaching their authorized resources. You need an identity management system.

An identification management system will belp stem a flood of user-access complaints and serve as an essential bulwark to your security system. If you don't have one, build one. But build it right the first time by addressing your most pressing needs now, with an eye toward adding features in the future. There are proven ways to do this, so don't be the poor soul who doesn't get it right the first time.

"I was talking to a client the other day who was developing a very customized proprietary [identity management] solution that didn't leverage standards," says Roberta Witty, an analyst at Gartner Inc. "The application was very questionable from an infrastructure perspective. You have to ask, Who's liable in that case?"

Most identity management projects can be broken down into these areas: Planning, adopting standards, determining when to centralize password administration and when to delegate it, and leveraging early successes to cost-justify future initiatives. Here are some tips for implementing an identity management project.

1 **Plan a quick-hit list.** Start by determining what portions of identity management will make the most positive impact on your business today. For example, when the state of North Carolina began looking at its identity management needs in January 2000, the state's Office of Information Technical Services (ITS) determined that the most important thing to address first were password resets, which chewed up 40% of help desk costs, according to Ann Garrett, chief information security officer for the state.

"We have 75,000 users using different systems who were forgetting their passwords, and I couldn't afford to be in business any longer," says Garrett.

ITS wanted a tool that would give users the ability to reset their own passwords with a challenge-response system; it chose Oblix Inc.'s NetPoint.

"The system has a Resume feature, so when a user forgets their password, all they have to do is answer a secret question, which takes the overhead off the administrator," explains Brent

Roberts, the state's identity administrator. Now, he adds, password reset requests have dropped to nearly zero.

2 Plan for the long haul. But it wasn't just the immediate password reset needs that North Carolina looked at, continues Roberts. ITS also took into account the state's long-term access initiatives, starting with a Web-based portal that state employees can use to access their human resources and other interoffice data, which was recently deployed online.

"We needed an infrastructure that could support the coming onboard of agencies in phases," Roberts explains. "So we put workflow and policy into the system that allows employees to change some of the noncritical fields, such as an office phone number. But other fields, like what data resources an employee has access to, are handled by their managers."

The next initiative is to open certain data first to state-based businesses and later to citizens. For that, the infrastructure must also support a variety of endpoint access controls such as tokens, smart cards and biometrics, which may be coming in 2005, Roberts says.

3 Think standards. The only way to facilitate North Carolina's short- and long-term plans was to build an identity infrastructure based on standards, which is another reason the state decided on Cupertino, Calif.-based Oblix, says Roberts.

For starters, Oblix works with the state's current directory standard, Lightweight Directory Access Protocol. But it also supports current and up-and-coming Web-based standards, including an XML-based authentication and authorization standard called Security Administration Markup Language and an emerging provisioning standard called Service Provisioning Markup Language — both of which come out of the Organization for the Advancement of Structured Information Standards in Billerica, Mass.

With standards-based infrastructures, you can plug in new rules and roles, and you can add cross-vendor identity management applications as they develop, says Gary Loveland, a partner in the security and privacy practice at PricewaterhouseCoopers in New York. In addition, a standards-based infrastructure makes it easier to grant access to outside business partners without making them use the same products you use, adds Witty.

4 Know when to centralize administration. Just as many organizations prefer to centralize administration of user accounts, says Loveland. This choice is usually made when a company determines that its most important identity management problem is inconsistent user data and rogue internal user accounts, particularly when workflow policy is already centralized around the company's human resources system.

This element of identity management is called user provisioning. For example, ProBusiness Services Inc., a human resources outsourcing services and technology vendor in Pleasanton, Calif., determined that its most immediate ID management problem was cleaning up inaccurate user account information for its 1,500 distributed employees whose metadata (telephone numbers, titles, spellings and the like) was often different than that stored in the company's Siebel Systems Inc. human resources system.

Human resources wanted to maintain control of adding new users and provisioning their resources, along with deleting users and deprovisioning their resources upon termination or transfer. In addition, human resources requested a system that could help enforce hiring, staffing and salary guidelines and alert the human resources managers when such policies are violated, says Phil Blank, vice president of IT at ProBusiness.

For this, Blank's team settled on Austin-based WaveSet Technologies Inc.'s Lighthouse Enterprise Edition because it has built-in connectors to Siebel and because it could provision anything — access to data resources, telephones, office space, even parking spaces. More importantly, it keeps user data consistent from application to application. And it automatically deprovisions access to data resources, ending the dangerous problem of having rogue passwords that trespassers can use to break into systems.

"The payback," Blank says, "is the human resources folks say they're seeing tremendous efficiencies in terms of accuracy of user information. And they don't have to spend so much time doing clerical work."

5 Work in phases, and justify each through ROI. Baking in money-saving and efficiency features like the human resources policy enforcement tools that ProBusiness added will go a long way toward helping IT departments justify subsequent phases of development, says Wendy Steinle, director of marketing for Novell Inc.'s Nsure identity management products.

MORE TIPS ONLINE

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And identity management is a lot easier to bite off in phases, say IT managers. Start with steps that can show a return on investment or cost savings, such as North Carolina's reduced help desk costs, which Garrett believes will pay for the state's identity management system in two years. She uses these numbers to cost-justify future projects, such as the addition of more robust access controls.

"Identity management done the right way can save a lot of money," adds Steinle. "That takes planning, evaluating your solution options, building a road map and creating measures of success." ▶

Radcliff is a freelance writer in Northern California. She can be reached at derad@aol.com.

THE DELEGATED ADMINISTRATOR

6

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Roberts, the state's identity administrator. Now, he adds, password reset requests have dropped to nearly zero.

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THE DELEGATED ADMINISTRATOR

Managing by Delegating

TIP 6 Know when to delegate. Like the state of North Carolina, about half of PricewaterhouseCoopers' clients start their identity management projects to address Web-based access needs, says Gary Loveland, a partner at the consulting firm. Doing this successfully calls for a delegated administration system, which lets end users start the process of registration themselves and delegates management of their user identities to department managers or systems administrators.

Nowhere is delegated administration more critical than in a business like Covisint LLC, a Southfield, Mich.-based online exchange for automakers, their suppliers and industry trade groups. With so much competitive information at stake, Covisint must guarantee that the 100,000 users logging on to the exchange to bid on work and to access manufacturer specifications and other data cannot skip around to reach their competitors' data, says Dave Miller, Covisint's chief information security officer.

But managing all those user IDs was impossible to do centrally, Miller says, and the number will soon double when DaimlerChrysler AG is added to the identity management system. So, with the help of RSA Security Inc.'s ClearTrust identity management suite, Miller has brought the number of user IDs under his domain to a manageable 10,000.

To do this, he established a root administrator at each of Covisint's member organizations to manage their own in-house users accessing the portal, he says. Importantly, ClearTrust is also able to handle complex hierarchies of delegated administrators, since some of them are also responsible for managing accounts at their subsidiary companies.

Access approvals are finalized through an automated e-mail trail between the requesting administrator, Covisint and the manufacturer. Deprovisioning is also handled through e-mail.

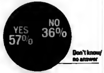
– Deborah Radcliff

y Users

SNAPSHOTS

Does your company currently have a business continuity plan?

More than one-third of the chief financial officers who responded to a recent poll said they don't have a business continuity plan to recover from disasters.



Base: 1,400 CFOs at U.S. companies with more than 20 employees.

SOURCE: ROBERT HALF MANAGEMENT RESOURCES, MENLO PARK, CALIF., JUNE 2003

Consumer Insecurity

Consumers who don't use online banking cite the following reasons.

Concerned about security	26%
Not comfortable doing banking business online	22%
Prefer to do all banking business face to face	21%
Concerned about privacy	6%

Base: 1,571 U.S. consumers who don't bank online; multiple responses allowed.

SOURCE: TOWERGROUP, NEEDHAM, MASS., JUNE 2003

Asian Epidemic

Security breaches in the Asia-Pacific region have reached epidemic levels, especially in China.

- 75% of software developers in the Asia-Pacific region reported a security breach in the past year.
- 84% of developers in China reported a security breach in the past year.
- 60% of developers in China reported three or more breaches in the past year.

Base: 600 software developers in the Asia-Pacific region.

SOURCE: EVANS DATA CORP., SANTA CRUZ, CALIF., MAY 2003

MARK HALL

Feeling Insecure

THE FIRST TIME MY NAME got me into trouble was in high school. A foothall player heard that I had taken his girlfriend out on a date, and rumor had it he was "gonna pound" me. When I met the hig fella, it took a lot of time and people to convince him that he had the wrong Mark Hall, despite his 5-foot-10-inch girlfriend's denial she'd ever met my 5-foot-4-inch self.

Recently, our sister publication *CIO* hired Mark Hall to lead its IT department. Congratulations have been coming in fast and furious — and curious, because no one knew I had such skills. And our parent company, IDG, even sent me a cell phone destined for him. (Now, if only they'd send me his paycheck, too.)

So, you can see why I'm feeling nervous in this new era of heightened security. Oh, I don't mind the gun-toting guards in airports and at public veoues. I've traveled abroad enough to be sanguine about seeing uniformed men and women toting Uzis and Glocks. What I fear are those armed and dangerous databases our governmeot and commercial entities are compiling; they could contain false positives on "Mark Hall" and other innocents in the war on terrorism.

It doesn't comfort me to know that the Defense Advanced Research Projects Agency (DARPA) has changed the name of its Total Information Awareness (TIA) project to Terrorist Information Awareness. After all, TIA's intent remains the same: to create integrated and efficient access to information in various public and private data silos and process it in order to thwart terrorist plots. As DARPA researchers told Congress in late May, the agency can't guarantee "the accuracy and utility of any informatioo retrieved by TIA's search tools, [but] consideratioo should be given, in implementation, to the quality of the databases to be queried." In short, false positives will persist, giving me nightmares that Donald Rumsfeld, a former champion wrestler, will someday come over to my house to pound me.

Then there's Regulatory DataCorp International LLC (RDC). Last year, *Computerworld* wrote about the newly formed commercial operation, noting that "Regulatory DataCorp will compile informatioo from public resources, including international, federal and local law enforcement records. It will then sell access to the database to other companies so they can screen potential customers" [QuickLink 30371].

RDC's users are primarily financial institutions that, by statute, must make every effort to weed out lawbreakers of all stripes. According to Chief Operating Officer Peter Nitze, as of last month, RDC already had "a little bit under 1.5 millioo names" in its database. Could "Mark Hall" be one of them?

Solving the false-positive problem in these massive databases isn't trivial. Stephen Brobst, chief technology officer at NCR's Teradata division, which is renowned for its monster databases, points to problems consumers have had with credit reports.

That's why Congress passed the Fair Credit Reporting Act, which gives us access to our credit histories to belp assure us that they're accurate. It's unlikely that these counterterrorism databases will offer us equal protections.

But Brobst points out that the problem gets stickier because of the catastrophic risks of false negatives — that is, likely terrorists and other nasty folks who areo't added to the database because the criteria for adding suspects are too conservative. As such, be thinks the tendency will be to protect against false negatives, increasing the odds of false positives.

Nitze agrees. That doesn't mean RDC ignores the problem. It uses human analysts, who receive more than a month of training, to review identical names by searching for data discrepancies to ensure that the good Mark Hall (that would be me) isn't mistaken for his evil twin.

This conundrum hasn't gone unnoticed inside the Pentagon. A Defense Department spokesman tells me, "It's quite possible for the Muslim equivalent of 'John Smith' to create false positives." So DARPA has also designed procedures to cull out the false positives. But the tendency for the creators of these applications is to err on the side of inclusiveness. In other words, the more "Mark Halls," the better.

It will take time and experience before projects like TIA and RDC are able to balance real security needs with the thorny problem of false positives, which waste their time and resources. In the meantime, I'm considering changing my name to Marcusian Halloflowskovich. Has a nice ring to it, don't you think? ▮

Evaluate Outsourcing Partners

Outsourcing security to managed providers requires safeguards to guarantee service. Here are tips from companies that have signed over security to the experts. By Barbara DePompa

WORKING WITH managed security service providers (MSSP) isn't much different from any other type of outsourcing commitment. All of the basic rules still apply, including setting specific requirements, incorporating strict service-level agreements with penalties, and re-evaluating your needs — and the provider's competencies — at regular intervals.

But when it comes to managing security functions, there are additional factors that can improve the relationship and the quality of security coverage provided by your MSSP.

TIP 7 Have a clear reason for outsourcing. Figure out whether the service provider will deliver better security or run the company's information security operations faster and cheaper than you could in-house.

Merrill Lynch & Co., for example, signed a global, multiyear contract to have VeriSign Inc. monitor and manage hundreds of network security devices, primarily firewalls and intrusion-detection systems. "We picked VeriSign because of the company's expert skill in monitoring and its ability to give us better information than we could gather on our own. The goal wasn't to reduce costs; it was to improve security," says David Bauer, chief information security and privacy officer at Merrill Lynch.

TIP 8 Ask probing questions. Jeff Nigriny, chief security officer at Exostar LLC in Herndon, Va., an online exchange for the aerospace and defense industry, suggests interviewing everyone at the MSSP about how they will provide coverage for your company. How many times has the provider had to issue a credit for failing to meet the service-level agreement? And how financially stable is it?

TIP 9 Set a time limit for responses. When Exostar contracted with TruSecure Corp., Nigriny included a clause in the a service-level agreement stating that TruSecure's response time to a problem couldn't exceed 15 minutes and that any configuration changes would have to be made within 30 minutes.

TIP 10 Remember: Monitoring for security breaches 24/7 simply isn't enough. "The MSSP must filter through the alerts, respond to problems as they arise and tell me what was done in a report later," says Nigriny, who decided it was time to cooside outsourcing when he was forced to sift through 3,000 incidents in a single day.

TIP 11 Use an MSSP that's nearby. Paul Castellano, general manager of information services, IT security and disaster recovery at Hagerstown, Md.-based Allegheny Energy Inc., selected RedSiren Inc. more than two years ago, primarily because the MSSP filled key requirements and was headquartered in Pittsburgh, which is within driving distance of Castellano's office. While not everyone is able to jump into the car to visit a service provider, "you really don't want to be on a plane every time there's a briefing or presentation," he says.

TIP 12 Make sure the MSSP offers fail-over operations that at least match your own. Castellano recommends using an MSSP that offers redundant network operations centers, which are critical for recovering from regional disasters. And even more important, he says, is the need to test those backup operations.

TIP 13 Understand and exploit the reports you get. An MSSP's reporting tools can be used to benchmark your security coverage and recovery performance against those of scores of other companies. Allegheny Energy has used the RedSiren reporting tools to build a baseline and enable Castellano's staff to perform monthly or quarterly "what if" security testing.

TIP 14 Think beyond the perimeter and "defend in depth." That's the advice of Nick Brigman, a vice president at RedSiren. Nowadays it takes more than antivirus software and a firewall to secure operations. Consider adding multiple intrusion-detection sensors in different areas around the company to better protect critical assets. Some customers add such devices both outside and inside their firewalls, Brigman says, to detect and track the incidents that breach them.

TIP 15 Figure out how to escalate a problem and how to gain access to the "real" security experts inside the MSSP. Chances are, when you call the MSSP for assistance about a security alert, the person who answers the phone may not be the key person you need, says Adam Joseph, former CEO of TruSecure and now an indepeodent consultant. He says MSSPs typically don't keep many highly skilled security technicians on duty aroued the clock, so identifying the people with real expertise is critical to getting better service.

In general, experts say that the key is to develop a close, trusting relationship with the MSSP so the IT department can focus on strategic security goals while the MSSP handles the mundane daily operations. ▶

SERVICE HYPE

TIP 16 Investigate each of the security services you expect to get. Analysts say there's much hyping of services going on today, as MSSPs scramble to gain a footing in the market. So ask for sanitized incident reports, examine the level of content in them, and analyze the effectiveness of the service provider's response in each case.

DePompa is an independent writer and editor in Germantown, Md. She can be reached at bdepompa@comcast.net.

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MARIA RABINKY

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SERVICE HYPE

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Well, I was hoping to wear this new suede jacket I just bought, so I'm just kind of keeping my fingers crossed that it doesn't rain today.

IT guy has time to chat

Greg Brown, 33, seen talking freely to co-workers after deploying Nokia Message Protector

Features Automatic Signature Updates

"I used to spend most of my day managing all kinds of different security products like anti-virus and spam rejection for our email system," a beaming Greg told reporters at a recent IT industry seminar. "Trying to plug holes between our desktops and gateways, looking after all those scanning technologies, trying to keep them updated — all of that kept me in the trenches. But it changed with the implementation of Nokia Message Protector. Now that we have secured communication paths, spam protection and intelligent I can come out of my bunker and get to

all the names of the people in the Finance Department, and some of them are quite cool — I even go to the staff cafeteria at lunch sometimes now. The food's quite boring, but the people I have met are great. It's terrific," was his response to one reporter's about the automatic signature update feature. "My boss and greatest

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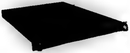
Introducing Nokia Message Protector.

Nokia has created a complete purpose-built appliance that integrates innovative security technologies including virus protection from Trend Micro™, with unique Nokia filtering software — known as statistical protection — to deliver new levels of enterprise email security. Nokia Message Protector deploys in minutes and provides secure, automatic updates to optimize email system integrity. With the ability to process up to 120,000 emails per hour, and the intelligence to control the content that enters, flows through and leaves your network, you can spend more time doing things that matter — like getting to know your colleagues! **If you'd like more time to chat, visit www.nokia.com/get_a_life/americas**

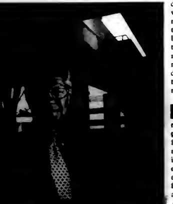


NOKIA

CONNECTING PEOPLE

Strengthen Security During Mergers

With merger and acquisition activity on the rise, here's how to protect your company's assets and exploit the opportunity to bolster the security of the combined business. By Bob Violino



[illegible] says you should try to create a post-merger security organization "that has the best of both companies."

MAINTAINING robust security is at the top of the IT priority list at many companies these days. But those that are in the midst of a merger or acquisition face some unique security challenges — and opportunities.

U.S.-based multinational companies plan to increase their merger and acquisition activity over the next two years, with 70% expecting to be involved in such deals in that period, according to a recent PricewaterhouseCoopers Barometer Survey of 170 executives.

That will mean lots more work for chief security officers — before the deal is signed and afterward, when security technologies and policies have to be integrated. The following are some practical tips for ensuring that data, networks and systems remain as secure as possible during the often turbuleot times that accompany a merger or acquisition.

TIP 17 **Perform due diligence on security well before the merger begins.** The cbief security officer or other senior security manager should be as involved in the process of evaluating potential merger or acquisition targets as finance, buman resources and other executives are. Analyze tbe security policies and technologies at the other company, and determine how vulnerable it is.

Also, determine whether the company educates employees about security in general and about things such as preventing the spread of viruses. Conduct a penetration test of tbe target company's network, and interview managers and staffers to gauge the prevailing attitude about security and protecting data and intellectual assets.

"Spend a lot of time learning about the company and its culture, where it does business, whether security [management] is centralized or decentralized, and how the company values security," says Bobby Gillham, manager of global security at ConocoPhillips in Houston, who headed security for Conoco during its 2002 merger with Phillips Petroleum. "Work closely with the other company's security manager to understand their security organization and its role in the organization."

TIP 18 **Assess the security practices and vulnerabilities of suppliers and other business partners that work closely with the merger or acquisition target,** says Laura Koetzle, an analyst at Forrester Research Inc. Do the trading partners have adequate security in place for e-commerce, online procurement and Web collaboration?

TIP 19 **Remember that a merger can always fall through because of regulatory restrictions, stockholder disapproval or other reasons.** "Companies have to be careful about releasing [security] information to the otber organization, because if the merger is halted, there's no way you can get them to 'unknow' those things you've told them," says Koetzle. This is particularly critical if the merger partner is a competitor. "You can disclose the level of security you provide, but doo't hand over all the keys to the kingdom in the early stages of a merger."

TIP 20 **Anticipate "social engineering" and other security threats from disgruntled employees at both of the companies involved.** While experts say bad behavior is usually the exception — most people are more concerned about finding a new job than harming the company if they believe they're going to be laid off — it makes sense to be ready for anything. As soon as an employee has been notified about a layoff, cut off access to all critical services and applications. The IT staff should be trained and prepared to shut off employees' network access as quickly as necessary.

"You need to pay particular attention to protecting against people walking out with proprietary information," Gillham says. "Sometimes people take tbings not to steal, bui to show prospective employers the work they've done. You have to limit access to proprietary systems for those people you know are being downsized."

TIP 21 **During the integration/transition phase, get the two companies' security groups working together as soon as possible.** Begin to identify which security technologies should be retained and which should be dropped, based oo the security oeeds of the new organization. "There may be an opportunity to create [a new] security organization that has the best of both companies," says Gillham. "Compare the security expertise of both companies and look for opportunities for synergy in the integration process."

TIP 22 **Be sure to address how to handle secure communications, particularly if the companies are using different types of e-mail or virtual private networks for remote access.** "That can be a hurdle; if the systems are not compatible, people may not be able to communicate with eacb other," says Nicholas Percoco, associate partner at Amhiron LLC, an information security advisory firm in Chicago. It may be oecessary to change security technologies at one company to guarantee secure communications. ▶

SECURITY DISASTERS

TIP 23 **If the target company turns out to be a security disaster and it's too late to get out of the deal, spend whatever it takes to quickly bring the company up to snuff, through new technology or upgrades of old products. Send in security experts or hire consultants to evaluate security, especially for the most critical systems and networks.**

Violino is a freelance writer in Massapequa Park, N.Y. You can contact him at bviolino@optonline.net.

Strengthen Security During Mergers

With merger and acquisition activity on the rise, here's how to protect your company's assets and exploit the opportunity to bolster the security of the combined business. By Bob Violino

MAINTAINING robust security is at the top of the IT priority list at many companies these days. But those that are in the midst of a merger or acquisition face some unique security challenges — and opportunities.

U.S.-based multinational companies plan to increase their merger and acquisition activity over the next two years, with 70%'expecting to be involved in such deals in that period, according to a recent PricewaterhouseCoopers Barometer Survey of 170 executives.

That will mean lots more work for chief security officers — before the deal is signed and afterward, when security technologies and policies have to be integrated. The following are some practical tips for ensuring that data, networks and systems remain as secure as possible during the often turbulent times that accompany a merger or acquisition.

17 Perform due diligence on security well before the merger begins. The chief security officer or other senior security manager should be as involved in the process of evaluating poteotial merger or acquisition targets as finance, human resources and other executives are. Analyze the security policies and technologies at the other company, and determine bow vulnerable it is.

Also, determine whether the company educates employees about security in general and about things such as preventing the spread of viruses. Conduct a penetration test of the target company's network, and interview managers and staffers to gauge the prevailing attitude about security and protecting data and intellectual assets.

"Spend a lot of time learning about the company and its culture, where it does business, whether security [management] is centralized or decentralized, and how the company values security," says Bobby Gillham, manager of global security at ConocoPhillips in Houston, who headed security for Conoco during its 2002 merger with Phillips Petroleum. "Work closely with the other company's security manager to understand their security organization and its role in the organization."

18 Assess the security practices and vulnerabilities of suppliers and other business partners that work closely with the merger or acquisition target, says Laura Koetzle, an analyst at Forrester Research Inc. Do the trading partners have adequate security in place for e-commerce, online procuremeot and Web collaboration?

19 Remember that a merger can always fall through because of regulatory restrictions, stockholder disapproval or other reasons. "Companies have to be careful about releasing [security] information to the other organization, because if the merger is halted, there's no way you can get them to 'unknow' those things you've told them," says Koetzle. This is particularly critical if the merger partner is a competitor. "You can disclose the level of security you provide, but don't hand over all the keys to the kingdom in the early stages of a merger."

20 Anticipate "social engineering" and other security threats from disgruntled employees at both of the companies involved. While experts say bad behavior is usually the exception — most people are more concerned about finding a new job than harming the company if they believe they're going to be laid off — it makes sense to be ready for anything. As sooo as an employee has beeo notified about a layoff, cut off access to all critical services and applications. The IT staff should be trained and prepared to shut off employees' network access as quickly as necessary.

"You need to pay particular attention to protecting against people walking out with proprietary information," Gillham says. "Sometimes people take things not to steal, but to show prospective employers the work they've done. You have to limit access to proprietary systems for those people you know are being downsized."

21 During the integration/transition phase, get the two companies' security groups working together as soon as possible. Begin to identify which security technologies should be retained and which should be dropped, based on the security needs of the new organization. "There may be an opportunity to create [a new] security organization that has the best of both companies," says Gillham. "Compare the security expertise of both companies and look for opportunities for synergy in the integratioo process."

22 Be sure to address how to handle secure communications, particularly if the companies are using different types of e-mail or virtual private networks for remote access. "That can be a hurdle; if the systems are not compatible, people may not be able to communicate with each other," says Nicholas Percoco, associate partner at Ambiroo LLC, an information security advisory firm in Chicago. It may be necessary to change security technologies at one company to guarantee secure communications. ■

SECURITY DISASTERS

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Violino is a freelance writer in Massapequa Park, N.Y. You can contact him at bviolino@optonline.net.

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Thwart Insider Abuse

Here's how to detect and stop attacks by clueless or disgruntled employees. By Dan Verton

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According to the most recent survey by the American Society for Industrial Security in Alexandria, Va., current and former employees and on-site contractors with authorized access to facilities and networks continue to pose the most significant risk to intellectual property such as research data, customer files and financial information.

What follows is a list of the best tips — from a variety of IT security professionals — on how to detect and prevent insider abuse of computer and network resources. Experts say that all security programs should focus on people, process and technology, so we've broken the list into those three categories.

People

24 **Require new hires to go through a security orientation.** Have employees review and sign a policy concerning the acceptable use of company IT resources. In addition, an orientation program should include a review of the threats; a specific list of do's and don'ts to protect corporate information, passwords and physical security; and what to do (and whom to contact) if an employee discovers a security violation.

26 **Establish a corporate "neighborhood watch" program.** Set up a reporting structure that is able to detect irregularities and prevent social engineering.

27 **Check the backgrounds of all employees who handle sensitive data.**

28 **Make sure the passwords for systems administrators have the strongest level of authentication and are given to the smallest potential audience.**

29 **Require systems administrators to take two consecutive weeks of vacation annually** — similar to the vacation requirements for senior bank managers — so that fraudulent activities or other improprieties can surface while they're gone.

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32 **Establish a reliable system for assigning access to company data.** Make sure the system can disable such access immediately if a major lay-off occurs.

33 **Determine, based on job function, seniority and other roles, who needs to have access to which company resources and why.**

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35 **Keep an inventory of your IT assets.** Know the type and version of every operating system and application you use, as well as the number of computers and networking devices you have and all of the firewall types and rules.

36 **Conduct security audits on all systems every 24 hours** to ensure that the systems are secured and haven't regressed or been rendered vulnerable.

37 **Make the ability to support your company's information access policy one of the criteria for buying new software or systems.**

38 **Evaluate the security of your business partners and vendors.**

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39 **Identify dormant IDs or orphaned accounts.** Install or create a system for actively checking for and deleting out-of-date IDs and accounts as well as inactive users.

40 **Have an automated system for resetting passwords on a regular basis.**

41 **Make sure that the accounts belonging to laid-off employees aren't simply deleted.** Instead, incorporate a suspend feature in your provisioning process that prevents outside access but enables the IT department to search for key data in the account.

Yikes!

A survey of managers and employees with access to sensitive customer information found the following:

- **66%** said their co-workers, not hackers, pose the greatest risk to consumer privacy; only 10% said hackers are the greatest threat.
- **62%** reported incidents at work that put customer data at risk for identity theft.
- **46%** said it would be "easy," "very easy" or "extremely easy" for workers to remove sensitive data from the corporate database.
- **32%** said they're unaware of internal company policies to protect customer data.
- **28%** said their company does not have a written security policy or they didn't know if it has one.

Base: Survey of 500 U.S. workers and managers who handle sensitive customer information at work.

SOURCE: HARRIS INTERACTIVE INC., ROCHESTER, N.Y., MAY 2003

42 **Convert physical access-control devices from electronic systems to network-enabled devices** so that physical access events can be correlated with network events and file-access attempts. For example, integrate your building-access card reader with your IT network so that an event like a person entering a building late at night can be correlated with any cybersecurity violations that take place around the same time.

43 **Collect historical data for individual employees regarding network activity and file-access attempts and then employ a formula to calculate a risk factor for each event.** Rank the risk factors and sort by employee to identify the riskiest employees or those who need remedial security training. ▶

MORE TIPS ONLINE

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Protect Privacy, Step by Step

A step-by-step process for protecting your company by guarding customer privacy. By Jaikumar Vijayan

MARIS RENDON

A FLURRY of federal and state regulations and international laws is pushing data privacy management to the top of the business agenda. Companies that fail to comply with those laws will increasingly be exposing themselves to legal liability from their customers and from regulators.

Laws such as the Health Insurance Portability and Accountability Act and the USA Patriot Act have already established information privacy rules for companies in the health care and financial services industries. New this month is California's SB 1386 identity protectioo bill, and coming down the pike are other state and federal versions of the law. International rules such as those covering European Union nations and Canada are also forcing U.S. companies to confront privacy issues.

For a lot of companies, complying with such regulations will require a substantial effort from both a technology standpoint and a process standpoint, says Paul Paez, president of Privastaff Inc., a San Jose-based privacy consultancy.

Even so, the laws make it vitally important for companies to develop privacy policies, practices and procedures, says Charlene Brownlee, an attorney at Fulbright & Jaworski LLC in Austin. "A company's liability will be measured against what steps it took to protect data privacy," Brownlee says. "You are going to need to show what you did to be in compliance with industry standards."

That means clearly articulating a privacy policy and then taking the following technolόgy and process measures to implement and manage it.

44 **Assess what steps need to be taken in order to comply with privacy regulations relating to your business and with your company's privacy policies.**

45 **Audit how and why personal data is collected, used, shared, accessed, stored and protected.**

46 **Look at the manual and automated processes that are involved in this cycle and figure out which gaps need to be filled.**

As obvious as these measures may seem, this kind of gap analysis is a crucial first step to any privacy management effort, Brownlee says. Otherwise, there's simply no telling where or how personal information is embedded within your enterprise and how it needs to be protected.

47 **Control who touches the data and why,** says Arshad Noor, CEO of StrongAuth Inc., a Cupertino, Calif.-based identification management firm. Have formal processes for restricting physical and virtual access to confidential customer or employee data.

48 **Secure the manual and automated processes by which data is copied, shared, backed up and stored.** For instance, limit the number of people who have physical access to backup tapes or other storage media containing confidential information. Have strong user-authentication and access-control technologies to ensure that only authorized people have access to confidential information, Noor suggests.

49 **Understand what permissions are associated with personal data used by applications – especially ones such as CRM, ERP and supply chain,** says Paez. A lot of the customer data may have been collected in a manner not consistent with new regulations or the company's privacy policy, he says. See whether the permissions need to be updated and new permission fields need to be added to these applications. Investigate and implement processes for tracking and storing user permissions and for seeing that the data is used in a consistent manner across all applications, Paez says.

PREPARE TO BE HACKED

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51 **Collect personal information only if it's absolutely needed, and don't store it for longer than you need it,** Brownlee advises. Examine whether storing personally identifiable information, such as Social Security and driver's license oumbers, is really key to your business.

If not, are there alternatives to collecting and storing such information? The more personal data you collect, the greater your liability exposure, according to Brownlee.

52 **Implement good configuration management, asset management and change management processes,** Noor says. Make sure that the hardware, operating systems and networks that process personal data are hardened and locked down. Shut down all unnecessary functions, configuration settings and permission fields, he says. Stick the servers behind firewalls. ■

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OFFICE PERIPHERALS

TIP 25 **Don't overlook the sensitive data on common office peripherals, such as copiers and printers. When these products are used, the memory of that use remains in the machine, sometimes for years. There are products available to address this issue, such as "digital shredder" software, which erases data from the machine after each use.**

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PREPARE TO BE HACKED

TIP 50 **Encrypt all confidential data when it's being transmitted and when it's at rest –on storage media. That way, even if it gets hacked, the information is secure. Encryption might also provide some legal cover for companies that get hacked. Businesses that encrypt data are specifically exempt from California's SB 1386, for instance. It may also be a good idea to consider storing a user's name separately from other pieces of identifying information such as a Social Security or driver's license number.**

TIP 51 **Collect personal information only if it's absolutely needed, and don't store it for longer than you need it,** Brownlee advises. Examine whether storing personally identifiable information, such as Social Security and driver's license numbers, is really key to your business.

If not, are there alternatives to collecting and storing such information? The more personal data you collect, the greater your liability exposure, according to Brownlee.

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Plug IM's Security Gaps

It may not be sanctioned by IT, but with 25 million business users, instant messaging is a security problem you can't ignore. Here are some tips for locking it down. By Mary Brandel

WHEN YOU SAY the words *instant messaging* and *security* to many IT executives, you might as well be referring to oil and water. Some CIOs have simply banned the use of this collaboration tool in their companies, citing it as a gaping hole through which viruses, hackers and corporate spies can enter and out of which company secrets, libelous statements and unaudited communications can flow.

These naysayers have a point — Gartner Inc. in Stamford, Conn., has identified IM as one of the top 11 security issues for 2003. "IM, by its very nature, punches a hole in the firewall, and that opens up the possibility of inviting in a dangerous worm," says Douglas Schweitzer, a Gartner analyst.

The problem is, IM originated as a free download for consumers and wasn't designed with corporate security in mind. Instant messages bypass virus scanners, and users can inadvertently download files cootaining malicious code. And because of IM's casual nature, users may be less than professional in their communications. Meanwhile, these messages go uncaptured by any corporate database, making them unauditable.

But officially sanctioned or not, IM use is nearly unstoppable — and in some instances, it's a critical business tool. Last year, there were 80 million IM users in the U.S., and 25 million of those were business users, according to The Yankee Group in Boston. Fortunately, there are ways to plug many IM security gaps. Here are some tips on how to tame the wild world of IM:

53 Keep IM within the firewall. Some companies, such as Terra Nova Trading LLC in Chicago, want their employees to have IM — just not over the public network. So Kevin Ott, vice president of technology at the hrokerage, installed an IM system called E/pop from WiredRed Software Corp. in San Diego.

E/pop and similar systems, such as IBM Lotus Software Group's Sametime, Jabber Inc.'s Messenger and even America Online Inc.'s Enterprise AIM, route instant messages locally, so they never traverse the public network.

These systems also offer audit and reporting capabilities, as well as features such as virus scanning, directory integration with other e-mail systems, message encryption and user authentication. "It's a completely closed system, and we can audit the transcripts and put them in a database," Ott says.

54 Install a gateway product. Other companies, such as brokerage firm Craig-Hallum Capital Group LLC in Minneapolis, rely on IM to communicate with business partners. That's why it turned to an IM gateway product from FaceTime Communications Inc. in Foster City, Calif. Other gateway vendors include Akonix Systems Inc., IMlogic Inc. and AOL.

These systems can either route instant messages on the internal corporate network for employee-to-employee communications or interface with consumer IM clients to send messages to outside parties over the Internet.

However, a proxy server sits between the IM clients on both sides of the firewall and scans for viruses, filters content, periodically attaches disclaimers to messages and sends all messages to a database for archiving.

These systems also allow IT to hlock file transfers, authenticate users and control who's allowed to use IM. Some gateway products allow IM conversations to be monitored in real time and even interrupt those that break corporate policies. More common, however, is after-the-fact monitoring. "We do a postreview, because IM conversations are supposed to happen in real time," says John Threadgill, managing director of IT at Morgan Keegan & Co. in Memphis. "The system checks for keywords, and if one appears, the IM is flagged and a manager is notified."

56 Encrypt messages. Even with a gateway product, there is still a vulnerability: "What happens to the message when it's out on the Internet?" asks IDC analyst Robert Mahowold. Consumer IM systems store instant messages on their servers in clear text, which anyone, including hackers, can read.

Encryption is one way to bridge this security gap, although very few companies actually use it because of its complexity and the fact that many products work only if both parties use the same encryptioo software. Another approach, offered by AOL and VeriSign Inc., is to certify instant messages sent to partners. However, Mahowold says, "it's a payment level on top of paying for the IM client and server."

57 Hammer home your IM policy. After closing what gaps you can with technology, the best safety net is to educate users on IM's security holes. One way to do this with an IM gateway is to have the system send periodic reminders of IM policies.

At The Weather Channel Interactive Inc. in Atlanta, which uses Akonix's L7 system, salespeople who use consumer IM systems get a daily pop-up reminder, says John Penrod, a oetwork architect there. "We want them to keep in mind that we're not preventing them from putting a dollar mark into an IM but that it would be preferable for them to think about whether that communication should be done in a more secure way," he says. ◆

Brandel is a Computerworld *contributing writer in Grand Rapids, Mich. Contact her at brandels@attbi.com.*

MORE TIPS ONLINE

Companies share more advice on locking down instant messaging:

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[illegible] says Jim Wade

DANIEL LEVIN

Boost Your Security Career

Tips and strategies for developing a career in information security.

By Amy Helen Johnson

CAREERS

INFORMATION security specialists have it a little better than other IT professionals in today's tight job market, but not by much. That's according to Jim Wade, senior vice president and chief information security officer at financial services firm KeyCorp in Cleveland.

The pay is slightly higher, Wade says — maybe 10% more than for other IT positions at comparable levels — and a high-quality candidate, especially in the senior-level ranks, should have no problem finding interested employers.

To become a top-ranked information security specialist, you have to make the right moves. Here are some tips to help you manage your information security career.

58 **Get the right certifications,** says Wade. There are three types: vendor- and technology-specific, skills-based, and knowledge-based. You'll likely need all three at different places in your career.

When you're first starting, he says, knowledge of a specific technology, like firewalls, is good for operations jobs. The next step, demonstrating a skill such as intrusion-detection expertise, earns you entry into specific projects. When you want to move into management róles, a broad-based certification, like Certified Information Systems Security Professional (CISSP) or Certified Information Security Auditor, is the way tn go. (Wade is also president of International Information Systems Security Certification Consortium Inc., a professional standards group for the security industry and the body that oversees the CISSP test.)

The better certifications account for the fact that information security is a continual learning process, says Kerry Anderson, vice president and information security officer at Bostnn-based FMR Corp., the parent company of Fidelity Investments. So look for ones that require continuing education credits tn maintain your status. They indicate that you stay up tn date in this changing field. Ones that require you to demonstrate on-the-job experience are also more valuable to employers, she says.

59 **Consider earning a graduate degree in information security,** says Wade. Look for programs that combine technical training with business strategy courses; today's security professional has to be as savvy about corporate financial goals as he is about Unix security holes. Two places to check out: Purdue University and Idaho State University.

If you're looking for more academic programs, Anderson suggests researching the universities recognized by the National Security Agency as Centers of Academic Excellence in Information Assurance Education. That list is available at *www.nsa.gov*.

60 **Increase your disaster recovery and risk management skills,** says Kenneth Davis, director of information security at Allstate Insurance Co. in Northbrook, Ill. People with disaster recovery skills are vital to businesses because they keep operations running in an emergency. A need for people with risk management expertise arises out of recent government regulations that require businesses such as financial services firms and health care providers to protect personal data.

61 **Build a home laboratory,** says Tom Baltis, manager of risk management at Allstate. Readily available freeware or shareware versions of many commonly used technologies put such a lab within the means of most people, he says. This gives IT professionals the opportunity to acquire knowledge of the underlying theories and uses of security tools — skills that transfer regardless of the actual product used.

62 **Give something back to the information security community,** says Wade. The best way to do that, he says, is to work with standards bodies and professional organizations to develop best practices and enhance the common body of knowledge.

63 **Get on a project working with strategic partners,** such as vendors, service providers and customers, Wade says. This gives you valuable experience in an area of growing importance: providing adequate levels of security when the risks arise from connecting to systems outside your infrastructure.

64 **Consider an internship in IT security if you're still in school,** says Wade. Not only will you get practical, real-world experience, but you'll also make valuable contacts for your postgraduation job search.

Information security jobs are everywhere — from Fortune 500 companies to mom-and-pop businesses — and in every state, says Davis. That means you have a good chance of being able to find work where you live. And if you're willing to relocate, the chances of finding your dream job increase. ◗

ASK UNCLE SAM

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Johnson is a Computerworld *contributing writer. You can reach her at amy-helen@pobox.com.*

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The problem is, IM originated as a free download for consumers and wasn't designed with corporate security in mind. Instant messages bypass virus scanners, and users can inadvertently download files containing malicious code. And because of IM's casual nature, users may be less than professional in their communications. Meanwhile, these messages go uncaptured by any corporate database, making them unauditable.

But officially sanctioned or not, IM use is nearly unstoppable — and in some instances, it's a critical business tool. Last year, there were 80 million IM users in the U.S., and 25 million of those were business users, according to The Yankee Group in Boston. Fortunately, there are ways to plug many IM security gaps. Here are some tips on how to tame the wild world of IM:

TIP 53 Keep IM within the firewall. Some companies, such as Terra Nova Trading LLC in Chicago, want their employees to have IM — just not over the public network. So Kevin Ott, vice president of technology at the brokerage, installed an IM system called E/pop from WiredRed Software Corp. in San Diego.

E/pop and similar systems, such as IBM Lotus Software Group's Sametime, Jabber Inc.'s Messenger and even America Online Inc.'s Enterprise AIM, route instant messages locally, so they never traverse the public network.

These systems also offer audit and reporting capabilities, as well as features such as virus scanning, directory integration with other e-mail systems, message encryption and user authentication. "It's a completely closed system, and we can audit the transcripts and put them in a database," Ott says.

TIP 54 Install a gateway product. Other companies, such as brokerage firm Craig-Hallum Capital Group LLC in Minneapolis, rely on IM to communicate with business partners. That's why it turned to an IM gateway product from FaceTime Communications Inc. in Foster City, Calif. Other gateway vendors include Akonix Systems Inc., IMlogic Inc. and AOL.

These systems can either route instant messages on the internal corporate network for employee-to-employee communications or interface with consumer IM clients to send messages to outside parties over the Internet.

However, a proxy server sits between the IM clients on both sides of the firewall and scans for viruses, filters content, periodically attaches disclaimers to messages and sends all messages to a database for archiving.

These systems also allow IT to block file transfers, authenticate users and control who's allowed to use IM. Some gateway products allow IM conversations to be monitored in real time and even interrupt those that break corporate policies. More common, however, is after-the-fact monitoring. "We do a postreview, because IM conversations are supposed to happen in real time," says John Threadgill, managing director of IT at Morgan Keegan & Co. in Memphis. "The system checks for keywords, and if one appears, the IM is flagged and a manager is ootified."

KEYWORDS

TIP 55 Filter content for sensitive keywords. Health care companies might block or flag messages with sensitive patient information, whereas financial firms look for phrases like "guaranteed return." All companies might disallow certain number patterns, such as those of Social Security numbers.

TIP 56 Encrypt messages. Even with a gateway product, there is still a vulnerability: "What happens to the message when it's out on the Internet?" asks IDC analyst Robert Mahowold. Consumer IM systems store instant messages on their servers in clear text, which anyone, including hackers, can read.

Encryptioo is one way to bridge this security gap, although very few companies actually use it because of its complexity and the fact that many products work only if both parties use the same encryption software. Another approach, offered by AOL and VeriSign Inc., is to certify instant messages sent to partners. However, Mahowold says, "it's a payment level on top of paying for the IM client and server."

TIP 57 Hammer home your IM policy. After closing what gaps you can with technology, the best safety oet is to educate users on IM's security holes. One way to do this with an IM gateway is to have the system send periodic reminders of IM policies.

At The Weather Channel Interactive Inc. in Atlanta, which uses Akonix's L7 system, salespeople who use consumer IM systems get a daily pop-up reminder, says John Penrod, a network architect there. "We want them to keep in mind that we're not preventing them from putting a dollar mark into an IM but that it would be preferable for them to think about whether that communication should be done in a more secure way," he says. ■

Brandel is a Computerworld *contributing writer in Grand Rapids, Mich. Contact her at brandels@attbi.com.*

MORE TIPS ONLINE
Companies share more advice on locking down instant messaging:
QuickLink 39700
www.computerworld.com

of certification help security pros rise through the ranks, says Jim Wade

DANIEL LEVIN

Boost Your Security Career

Tips and strategies for developing a career in information security.

By Amy Helen Johnson

CAREERS INFORMATION security specialists have it a little better than other IT professionals in today's tight job market, but not by much. That's according to Jim Wade, senior vice president and chief information security officer at financial services firm KeyCorp in Cleveland.

The pay is slightly higher, Wade says — maybe 10% more than for other IT positions at comparable levels — and a high-quality candidate, especially in the senior-level ranks, should have no problem finding interested employers.

To become a top-ranked information security specialist, you have to make the right moves. Here are some tips to help you manage your information security career.

TIP 58 **Get the right certifications,** says Wade. There are three types: vendor- and technology-specific, skills-based, and knowledge-based. You'll likely need all three at different places in your career.

When you're first starting, he says, knowledge of a specific technology, like firewalls, is good for operations jobs. The next step, demonstrating a skill such as intrusion-detection expertise, earns you entry into specific projects. When you want to move into management roles, a broad-based certification, like Certified Information Systems Security Professional (CISSP) or Certified Information Security Auditor, is the way to go. (Wade is also president of International Information Systems Security Certification Consortium Inc., a professional standards group for the security industry and the body that oversees the CISSP test.)

The better certifications account for the fact that information security is a continual learning process, says Kerry Anderson, vice president and information security officer at Boston-based FMR Corp., the parent company of Fidelity Investments. So look for ones that require continuing education credits to maintain your status. They indicate that you stay up to date in this changing field. Ones that require you to demonstrate on-the-job experience are also more valuable to employers, she says.

TIP 59 **Consider earning a graduate degree in information security,** says Wade. Look for programs that combine technical training with business strategy courses; today's security professional has to be as savvy about corporate financial goals as he is about Unix security holes. Two places to check out: Purdue University and Idaho State University.

If you're looking for more academic programs, Anderson suggests researching the universities recognized by the National Security Agency as Centers of Academic Excellence in Information Assurance Education. That list is available at *www.nsa.gov*.

TIP 60 **Increase your disaster recovery and risk management skills,** says Kenneth Davis, director of information security at Allstate Insurance Co. in Northbrook, Ill. People with disaster recovery skills are vital to businesses because they keep operations running in an emergency. A need for people with risk management expertise arises out of recent government regulations that require businesses such as financial services firms and health care providers to protect personal data.

TIP 61 **Build a home laboratory,** says Tom Baltis, manager of risk management at Allstate. Readily available freeware or shareware versions of many commonly used technologies put such a lab within the means of most people, he says. This gives IT professionals the opportunity to acquire knowledge of the underlying theories and uses of security tools — skills that transfer regardless of the actual product used.

TIP 62 **Give something back to the information security community,** says Wade. The best way to do that, he says, is to work with standards bodies and professional organizations to develop best practices and enhance the common body of knowledge.

TIP 63 **Get on a project working with strategic partners,** such as vendors, service providers and customers, Wade says. This gives you valuable experience in an area of growing importance: providing adequate levels of security when the risks arise from connecting to systems outside your infrastructure.

TIP 64 **Consider an internship in IT security if you're still in school,** says Wade. Not only will you get practical, real-world experience, but you'll also make valuable contacts for your postgraduation job search.

Information security jobs are everywhere — from Fortune 500 companies to mom-and-pop businesses — and in every state, says Davis. That means you have a good chance of being able to find work where you live. And if you're willing to relocate, the chances of finding your dream job increase. ◗

ASK UNCLE SAM

TIP 65 **Take a second look at government jobs, says Wade. After losing many good people to higher salaries and better opportunities in industry, the U.S. government is adapting its traditionally rigid employment practices to recruit and retain more information security professionals.**

Johnson is a Computerworld *contributing writer. You can reach her at amy-helen@pobox.com.*

The Almanac

An eclectic collection of research and resources. By Mitch Betts

Spyware Bots: They're Everywhere

Some of them are innocuous, just tracking Web site visits. But "spyware bots" — software modules deposited onto a PC without the user's knowledge — are the truest form of Trojan horses, says Jim Hurley, an analyst at Aberdeen Group Inc.

Some of these bots are treacherous, he says, capable of hijacking the browser, capturing keystrokes, sniffing passwords, collecting confidential data, piggybacking on telecommunications services and allowing outsiders to take control of the PC.

Spyware makes its way into the bowels of the PC when new software packages are installed or upgraded. In addition, e-mail and Web portals contain self-installing spyware agents, Hurley explains.

Few people know that their PC is riddled with spyware bots, which communicate tbe information they collect to Web sites. Neither antivirus software nor firewalls can stop them.

"Spyware is now on every PC in every home, corporation and government agency throughout the world," Hurley asserts. His recommendation: Type *spyware* in a Web search engine and get one of the spyware detection-and-elimination tools listed there to find out what sort of spies are lurking in your PC.

Managing Wireless Risks

49% have instituted security policies for wireless usage.

41% have scanned their networks to identify rogue wireless networks.

29% have issued guidelines to employees for safer use of Wi-Fi.

SOURCE: [illegible]

SANITIZING hard drives is rarely done.

Resold Hard Drives Yield Private Data

MIT researchers have confirmed that many resold and discarded computers — even those with "erased" hard disks — harbor confidential data such as credit card numbers and medical records that can be readily recovered.

Scavenging through the data left on 158 secondhand disk drives, the researchers found more than 5,000 credit card numbers, as well as detailed personal and eorporate records. One disk apparently eame from an automated teller machine in Illinois and had a year's worth of financial transactions.

Many of the disk drives had been reformatted, or the My Documents folder had been deleted, but that didn't make the data unreadable. In all, only 12 drives were properly sanitized, the researchers reported in the journal *IEEE Security and Privacy*.

Patent Watch

- **A method for detecting security vulnerabilities in a Web application.** Most scanners look for vulnerabilities at the network level, but this one probes for security weaknesses at the application level. — *U.S. Patent No. 6,584,569, issued June 24.* Eran Reshef, Yuval El-Hanany, Gil Raanan and Tom Tsarfati, for Sanctum Ltd. in Herzelia, Israel.
- **A "digital persona" for providing access to personal information.** An information server stores a person's identifying information and privacy preferences. If another computer requests the personal data, the digital persona server compares the request with the privacy preferences and either approves the release of the data or denies the request if the conditions are unacceptable. — *U.S. Patent No. 6,581,059, issued June 17.* Robert Carl Barrett and Paul Philip Maglio, for IBM.

Unisys Suite Detects Criminal Patterns

Unisys Corp. recently unveiled the Active Risk Monitoring System (ARMS), software that may help banks spot patterns of seemingly unrelated events that add up to potential fraud, identity theft or money laundering.

Actimize Ltd. in New York provides the underlying analytics technology, which monitors transactions in real time, identifies patterns of suspicious behavior and flags transactions according to predefined criteria.

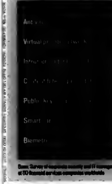
For example, suppose a criminal uses 30 stolen ATM cards in succession to withdraw $500 each time. None of those transactions taken alone would raise a flag, but ARMS can detect a change in the rate of transactions during a certain time period or spot the increased number of cards that have never been used at that ATM before, Unisys says.

— *Paul Roberts, IDG News Service*

Financial Security

The state of IT security at 80 financial institutions around the world:

- Security is about 5% to 6% of the IT budget in developed countries.
- 68% currently have or plan to establish in the next two years the position of chief security officer or chief information security officer.
- 40% have a chief privacy officer, and another 6% intend to appoint one within the next two years.
- 39% acknowledged that their systems had been compromised in some way within the past year.
- 24% have cyber risk insurance, and another 6% intend to acquire such coverage.



Base: Survey of corporate security and IT managers at 80 financial services companies worldwide

SOURCE: 2003 GLOBAL SECURITY SURVEY BY DELOITTE TOUCHE TOHMATSU, NEW YORK, JUNE 2003

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> **"Security spending can't continue to consume ever-increasing portions of the IT budget. No enterprise can afford to spend more on insurance than on new product development. By 2005, security groups that can't demonstrate security effectiveness metrics will experience flat to declining IT security funding."**
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[illegible] Management Software

Buffer Overflow

DEFINITION

A **buffer overflow** occurs when a computer program attempts to stuff more data into a buffer (a defined temporary storage area) than it can hold. The excess data bits then overwrite valid data and can even be interpreted as program code and executed.

BY RUSSELL KAY

CAN THERE be too much of a good thing? That's certainly true for computer input. Do an Internet search on the term *buffer overflow*, and you'll come op with hundreds of thousands of links, most related to security.

In the National Institute of Standards and Technology's ICAT index of computer vulnerabilities (*http://icat.nist.gov*), six of the top 10 involve buffer overflows. In 1999, the now-defunct research firm Hurwitz Group Inc. named buffer overflow the No. 1 computer vulnerability. Four years later, it's still a major problem.

If you've ever poured a gallon of water into a pint-size pot, you know what *overflow* means — water spills all around.

Inside a computer, something similar happens if you try to store too much data in a space designed for less. Input normally goes into a temporary storage area, called a buffer, whose lengtb is defined in the program or the operating system.

Ideally, programs check data length and won't let you input an overlong data string. But most programs assume that data will always fit into the space assigned to it. Operating systems use buffers called stacks, where data is stored temporarily between operations. These, too, can overflow.

When a too-long data string goes into the buffer, any excess is writteo into the area of memory immediately following that reserved for the buffer — which might be another data storage buffer, a pointer to the next instruction or another program's output area. Whatever is there is overwritten and destroyed.

QUICK STUDY

That in itself is a problem. Just trashing a piece of data or set of instructions might cause a program or the operating system to crash. But much worse could happen. The extra bits might be interpreted as instructions and executed; they could do almost anything and would execute at the level of privilege (which could be root, the highest level) assigned to that particular memory area.

Bad Programming

Buffer overflow results from a well-known, easily understood programming error. If a program doesn't cbeck for overflow oo each character and stop accepting data when its buffer is filled, a potential buffer overflow is waiting to happeo. However, sucb checking has been regarded as unproductive overhead — wheo computers were less powerful and had less memory, there was some justification for not making such checks. Moore's Law has removed that excuse, but we're still running a lot of code written 10 or 20 years ago, even inside current releases of major applications.

Some programming languages are immune to buffer overflow: Perl automatically resizes arrays, and Ada95 detects and prevents buffer overflows. However, C — the most widely used programming language today — has oo built-in bouods checking, and C programs often write past the end of a character array.

Also, the standard C library has many functions for copying or appending strings that do no boundary checking. C++ is slightly better but can still create buffer overflows.

Cracker's Choice

Buffer overflow has become one of the preferred attack methods for writers of viruses and Trojan horse programs. Crackers are adept at finding programs where they can overfill buffers and trigger specific actions running under root privilege — say, telling the computer to damage files, change data, disclose sensitive information or create a trapdoor access point.

In July 2000, it was discovered that Microsoft Outlook and Outlook Express let attackers compromise target computers simply by sending e-mail messages. No ooe even had to open a message; as sooo as the user downloaded tbe message, message-header routines went into action — with uncbecked buffers that could overflow and trigger code execution. Microsoft has since created a patch that eliminates the vulnerability. ◗

Kay is a Computerworld *contributing writer in Worcester, Mass. Contact him at russkay@charter.net.*

EXPLOITING A BUFFER OVERFLOW

1) Our function is using a buffer 240 bytes long, which happens to be located at memory address 00000077.

Buffer address (8 bytes)	00000077
Buffer contents (240 bytes)	[blank]
Old base pointer (8 bytes)	12345678
Return instruction pointer (8 bytes)	00410000

2) As it executes, the function begins to fill the buffer with A's.

Buffer address (8 bytes)	00000077
Buffer contents (240 bytes)	AAAAAAAAAAAAAAAA . . .
Old base pointer (8 bytes)	12345678
Return instruction pointer (8 bytes)	00401000

3) After 240 bytes, the buffer is full. All subsequent bytes overflow into the next memory area, overwriting the old base pointer and the return instruction pointer.

Buffer address (8 bytes)	00000077
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Old base pointer (8 bytes)	AAAAAAAA
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4) Now suppose that instead of just writing A's, the function inserts malicious code.

Buffer address (8 bytes)	00000077
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Old base pointer (8 bytes)	12345678
Return instruction pointer (8 bytes)	40100000

5) After the buffer is filled with the malicious code, the old base pointer is overwritten.

Buffer address (8 bytes)	00000077
Buffer contents (240 bytes)	This is evil code. . . .
Old base pointer (8 bytes)	xxxxxxxx
Return instruction pointer (8 bytes)	00401000

6) Then the return instruction pointer is rewritten, not with random values but with the address of the buffer itself, which now contains malicious code. (The address can usually be determined by trial-and-error experimentation.)

Buffer address (8 bytes)	00000077
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Old base pointer (8 bytes)	xxxxxxxx
Return instruction pointer (8 bytes)	**00000077**

7) After the buffer is filled, the program will go to the location referenced by the instruction pointer and thus begin to execute the malicious code.

ONLINE RESOURCES

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WebS

The Next Chapter

Predictions: A Web services security breach will wreck the supply chain. And stolen fingerprints or eye scans will thwart biometric systems.

■ BYE-BYE INCOMPETENTS

The fakers, charlatans and incompetents will be purged from the IT security industry. In three years, 40% of the current gaggle of alleged security professionals will leave the industry — some to other professions, many to prison for egregious misrepresentation of their skills. By that time, the Department of Homeland Security will have mandated that all IT security professionals must pass a skills certification test run by the U.S. military academies.

■ *Thornton May, management consultant and futurist, Biddeford, Maine*

■ XML CATASTROPHE

In the next two years, there will be a major XML Web services security breach. The consequences will be much more severe than the defaced Web sites and stolen credit cards that caused mostly embarrassment in the early days of e-commerce. Instead, automated production lines will grind to a halt, company bank accounts will be emptied, 100-company-long supply chains will break, and the most proprietary corporate data may be disclosed.

■ *Eugene Kuznetsov, chairman and chief technology officer, DataPower Technology Inc., Cambridge, Mass.*

■ ATTACKS GET SPEEDIER

As attacks grow more professional in nature, we'll see an even greater increase in the speed of threats. For instance, "flash worms" would operate under the premise that a determined hacker could have obtained a list of all (or almost all) of the servers open to the Internet in advance of the release of the worm. Such an attack could infect all vulnerable servers on the Internet in less than 30 seconds. Protecting against these threats will require new, proactive technologies, including behavior blocking, anomaly detection and new forms of heuristics.

■ *Rob Clyde, CTO, Symantec Corp., Cupertino, Calif.*

■ OFFSHORE TERRORISTS

Next year, a "sleeper cell" terrorist group will infiltrate the offshore programming industry and be identified as the cause of a widespread worm that will have been injected in the code of a widely used software product.

■ *Tari Schreider, director of the security practice, Extreme Logic Inc., Atlanta*

■ NEW ORGANIZATIONAL CHART

Public and private companies, in large numbers, will merge physical and data security. They'll unify these two independent groups on the organizational chart and convert physical access-control systems from stand-alone systems to network-enabled systems that convert physical access activity into network data. This data about physical access will be correlated with IT activity reports to provide early detection and warning of security breaches.

■ *Joel Rakow, partner, Tatum Partners, Los Angeles*

■ SURGICAL STRIKES

Three or four years ago, hackers were taking a haphazard, shotgun approach to Internet attacks, but now they're using their tools to penetrate very specific and lucrative targets, especially enterprise networks containing valuable intellectual property. These highly targeted attacks are on the rise, each one more intelligent and harmful than the last. By 2005, targeted attacks will account for more than 75% of corporate financial losses from IT security breaches.

In the next two years, companies will need to build much stronger and more intelligent defenses around every network endpoint touching sensitive information, instead of depending on general perimeter security.

■ *Gregor Freund, CEO, Zone Labs Inc., San Francisco*

■ HORSES AND LOGGERS THREAT

By the end of 2003, Trojan horses and keystroke loggers will overtake viruses as the greatest threat to PC users. We'll see countless malicious attacks each month — and most will initially go undetected, causing companies to lose millions of dollars. This problem will be made worse by the proliferation of wireless laptops and other mobile devices, which provide hackers with a back door for infiltrating enterprise networks.

■ *Pete Selda, CEO, WholeSecurity Inc., Austin*

■ STOLEN FINGERPRINTS

Biometrics is perceived as the ultimate in security, but what does somebody do once their bioprint is stolen? Within three years, hackers will have all sorts of scanned fingerprints, retinal patterns, etc., and these will be used to bypass biometric network security. When your credit card is stolen, you phone Visa and have a new card issued. When your bioprint is stolen, do you call God and ask for a new set of fingerprints or eyes?

■ *Malcolm MacTaggart, president and CEO, CryptoCard Corp., Kanata, Ontario*

■ OUTDATED SIGNATURES

Behavioral-anomaly-based technology will replace traditional signature-based methods to prevent damage from viruses, worms and Trojan horses over the next three to five years.

■ *Jeff Platon, senior director of security marketing, Cisco Systems Inc.*

■ FIRING THE CLUELESS

P.T. Barnum knew that a sucker was born every minute. Since most cyber risk is directly attributable to insider activity, including the social engineering of digital dullards, a renewed focus on background checks is necessary. The chief security officer of the future, working with the HR chief, is going to find and fire digital "suckers" before their dimness puts the enterprise at risk.

■ *Thornton May*

MORE PREDICTIONS

Expect to see a U.S. Cyber Corps, secure e-mail and tougher federal security regulations:

QuickLink 30536
www.computerworld.com

Little Blue

The SmartPrint TruBlue, from Labcal Technologies Inc. in Quebec City, combines fingerprint biometric technology with a smart-card authentication reader. The goal of this hybrid device is to eliminate those pesky, complicated passwords. It plugs into a computer's Universal Serial Bus port.

– *Mitch Betts*

Time Is Running Out!

COMPUTERWORLD
PREMIER 100
IT LEADERS 2004

Nominate an outstanding IT leader for Computerworld's Premier 100 IT Leaders 2004 Awards program

EACH YEAR, *Computerworld* editors conduct a nationwide search for IT managers and executives who show technology leadership in their organizations. This prestigious awards program recognizes and honors IT professionals from a wide range of industries, drawing attention to the innovative, business-critical work they do.

ELIGIBLE NOMINEES include CIOs, CTOs, senior vice presidents, VPs, IT directors and managers from user companies, nonprofits, the computer industry and the private sector.

HONOREES will be announced in *Computerworld*'s Jan. 5, 2004, issue and be our guests at the 5th Annual Premier 100 IT Leaders Conference, on March 7-9, 2004, in Palm Desert, Calif.

Who Qualifies?

The deadline for all nominations is this Friday, July 18.
Go online to nominate at computerworld.com/p100nominations or Quicklink a3420
Questions? Contact us by e-mail at premier100@computerworld.com.

Lead Software Development Engineer (Denver) - Lead in the team effort to design, develop, code, test & debug new complex software/make significant enhancements to existing complex software using knowledge of C/C++ Java, SQL, UML, SCM, Oracle, PL/SQL, Pro*C, client-server programming & database design, & Unix programming. Lead review of input for documentation of new/existing software. Apply existing & introduce new & approved technologies to develop solutions using C/C++, PL/SQL, rule-based systems on a Unix platform. Lead others in the application of principles, theories & concepts & use of methodologies, tools, documentation processes & test procedures to complete projects including Magic Solutions & other business process automation applications. BS Comp Sci, Eng or related. 5 yrs. related experience. $93,800/year. M-F 8-5 detailed working knowledge of C/C++/Java/SQL, UML, SCM design/development tools, Oracle PL/SQL Pro*C. Client-server programming. Unix programming. Application by resume only to CODOL, Two Park Central, Suite 400, 1515 Arapahoe Street, Denver CO 80202; Ref job CO5049067

IT Positions, (St. Louis, MO).

Programmer Analyst: Develop multi-tier bus mgmt info syst and perform data modeling/recon in AS/400ILE envron using OO CL program. RPGIV PDM RUL SDA, and SQL400

Test Analyst: Complete testing life cycle of GUI/Web-based appls w/ test scripts using SQA /Rational Robot, setup data on AS/400 and testing populated data in Informix db on UNIX w/ SQL query, post beta release issues and QA process.

DBA: Design/implement terabyte-size relational Informix db on HP-Unix, SUN Solaris & IBM-AIX, db-structures/objects/logic design, RDBMS backup/recovery strategy tuning/security w/ Informix 4GL, VERITAS Netbackup, Shell scripts, C, and ESQL/C.

Require BS/BA or the equivalent in Comp Sc., Engr MIS or in a closely related field (will accept equ. exp.) plus min.6 mon exp. in offered/related position, and must be able to perform all the duties on the day of employment. Full time/competitive salary. Resume to: Crawford Group, Inc. at egioll@erac.com (include "ComputerWorld" in the subject line. NO CALL/EOE.

Software Dev. Co. req. Software Engr. Duties incl: Take an active role in the development and maintenance of Object oriented multi-threaded SCADA software. Software Engineer will develop software requirements specifications, functional specifications, software design documents and test documents. Design develop and implement ladder logic and device driver using MODBUS, SNP-X, IEC 870 protocol for PLC. Knowledge of GUI implementations is required for both the designing and debugging of code using VC++. Perform database design, develop, maintain and implement database scripts, stored procedure and triggers for SQL-Server and MS-ACCESS. On-site implementation of HMI software. Job to be performed at Frederick , MD and at various unanticipated client sites throughout the U.S. Resp. to IT Director, Engineering Systems Solutions, Inc. 5726 Industry Lane, Frederick, MD 21704

Senior Software Engineer

Develop complex, multi-tiered applications, especially Internet applications & to design & troubleshoot at all stages of development. Interact w/customer to understand & deal w/any potential complications or special requirements. In developing application, must formulate & develop application design using object oriented analysis & design techniques, develop & deploy design under operating systems UNIX or NT as well as conduct application engineering & assist customers in writing applications using assorted tools. Position requires extensive amount of travel in N. American region.

Rqrs: MS in CS, Engineering, or related or equivalent. A BS w/5 years of post-baccalaureate progressive experience will substitute for a Master's degree. Requires extensive knowledge in server side Java or C++, extensive knowledge in developing in UNIX or NT extensive knowledge in development using object oriented analysis & design techniques, knowledge of J2EE standards, including EJB, JSP Servlet Programming, JNDI & JBDC, knowledge of e-commerce projects; knowledge in XML, & knowledge of directory services. 8:30a.-5:30p. 40 hrs/wk. &115,000/yr. Submit 2 resumes to Case # 200200417. Labor Exchange Office 19 Staniford St. 1st. fl. Boston MA 02114

Software Engineer

Must design & develop complex enterprise/distributed systems for the internet using Java, supporting technologies & tools, analyze software requirements to determine feasibility of design within time & cost constraints, assist in planning, development, & modification of any existing application, develop & direct software system testing procedures, programming & documentation; & consult with customer concerning issues of a software system. Rqrs: BS in CS, E, or related w/2 years software industry experience. Rqrs experience in Java Programming Language; real-world experience designing & building Multi-Tier enterprise applications, Object-oriented design, & relational databases, & experience w/either weblogic application server or IBM's websphere Application server. Good communication skills are a must. 10:00a.-6:00p. 40 hrs/wk. $74,000/yr. Submit 2 resumes to Case # 200201855, Labor Exchange Office 19 Staniford St. 1st. fl., Boston MA 02114

Prog/Analysts to - analyze, design, test client server/web appls with OOAD methodologies using Java, VB, EJB, Servlets, JScript, XML, HTML, Oracle SQL, JDBC, Access, Weblogic, etc is Windows OS, analyze business processes, determine reqs., generate reports, document, maintain, debug, test, perform code optimization; OR - analyze, develop, maintain s/w appls using Oracle Appls, Oracle PL/SQL, Dev 2000, etc under Windows/UNIX OS; conduct functional testing/debug; perform data conversions, customize Forms/Reports using Oracle Appls standards, document, maintain & update dev process. Require: BS or foreign equiv. in CS/Engg (any branch) or related field & 2yrs exp. in IT. High salary. Travel involved. F/T. Resume to: HR, Bahwan Cybertek Technologies, Inc., 209 West Central Street, Ste 312, Natick MA 01760

ASP Web Dvlpr wanted by Multi-Nat'l Mktg & Ad Co. in Detroit. Oversee prgmng for database web projects using ASP; review site specs, methods & technology; ensure project deliverables are completed to standard, create applications to support multi-platform deployment; troubleshoot, eval/specify hardware, mng systs interface. Bach in Comp Sci or Engineering & 2yrs in job offered req. Respond to: HJ/HR Dpt, PO Bx 4241, GCS, NY 10163

Computers – Citigroup Inc. (Stamford, CT) seeks Software Engineers/Developers, Prog. Analysts/Admins, Project Mgrs, DB Architects, QA Engineers w/BS or MS in Comp. Sci. Engineering, Math, IT Electronics, CIS, MIS, Bus. Admin or related quantitative field or equiv. combo. of work exp. & educ. &/or exp. in any above or similar positions. Exp. in any of the following: UNIX, AIX, Sun/Solaris, PL/SQL, Sybase, Oracle, C++, ProC, VB, ASP, Visual Interdev, Java, JavaScript, Oracle, Netscape, MS IIS, Shell Scripting, HTML, Fox Pro, Perl, Windows NT, Networking, Security tools, QC, Encryption Tools, CASE tools, e-Commerce technologies. Forward resume to: Attn. DT, 100 First StamfordPlace, Stamford, CT 06902. No calls or faxes, please. EOE. M/F/D/V

Applications Systems Analyst wanted by Lux Resort & Casino in FL. Analyze, design/redesign, dvlp & support internet initiatives & web pgs. install & support server; work w/team to dvlp corp intranet, dvlp custom appl based interfaces. Bach in Comp Sci & 2yrs exp in job offered req. Respond to: Recruitment Mngr/Kerzner, 1000 S Pine Island Rd, Plantation, FL 33324

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Email: rod@kamaco.com

PROGRAMMER ANALYSTS for Mt. Prospect, IL office. Develop & maintain software applications using Oracle, SQL Server Erwin Linux, Sybase, XML, UML Interwoven, Coolgen, ClearCase, ClearQuest, Plumtree PVCS UNIX. Bachelors Degree reqrd is Computers, Engineering, Math or related field of study + 2yrs of related exp. 40 hrs/wk. Must have legal authority to work permanently is the U.S. Send resume to HR Manager, Magnum Technologies, Inc. 1000 Arbor Court, Mt. Prospect, IL 60056.

Sr. Software Engineer (with Bachelors degree and 5 years experience) - West Chester, OH. Job entails and requires experience in design and development of applications using, Oracle, Visual Basic, I2 Demand Planner, PL/SQL, Perl Script and Unix. Relocation within USA possible. Attractive compensation package. Send resume to Catherine Fanucchi, SDG Corporation 65 Water Street Norwalk, CT 06854

Paradigm Infotech is looking for programmer/system analysts, s/w engineers. Candidate must have BS with at least one-year IT experience. Good skills in C/C++ Java Oracle, WebLogic, VB, HTML, ERP are plus. Traveling is required. Apply jobs@paradigminfotech.com EOE

Synova Inc is seeking professionals with following skills: Programmer/System Analysts, Engineers in Mainframe, Web Tech, Technical/functional (SAP & Peoplesoft), Java, VB, Rational/RUP, UML, J2EE, Unix DBA, Oracle, SQL DBAs. Respond to ads@synovainc.com

System Analyst wanted to analyze data processing problems for application to electronic data processing systems, analyze user requirements, procedures, and problems to automate or improve existing systems, and related duties. BS in CS or in Electrical Eng. 2 yrs exp Required. Send resume to Advanced Control Systems Corp., 35 Corporate Park Dr., Pembroke, MA 02359

Sr Software Engineer (Monrovia, MD) for s/ware product co. Reqs. Bach degree in Comp Sci/Comp Eng or EE & 5 yrs exp in job offrd or relatd. Send resume to: Qovia Inc., 4937-D Green Valley Rd, Unit 4, Monrovia, MD 21770, attn: Lance C.

Engineering Programmer sought to convert engineering formulations into computer programs to be used for oil drilling equipment. Program and customize drilling rig systems to meet the clients' needs, and perform related duties. B.S. in Computer Science and experience required. Send resume to EMER International, Inc., 19424 Park Row, Suite 104, Houston, TX 77084

BitsOfCode Software Systems, Inc. (Katy, TX) is seeking System Analysts. 6 mon exp. using C#, C++, C, Java, TIBCO, FIX, FIXML, XML/XSLT/DHTML, J2EE/Swing, TOPS Financial Modules, Reuters/Tibco Market Feeds, JRun, COM/DCOM/ActiveX, JNI, JDBC, Excel VBA, Oracle, SQL, Javelin Appls, B2B Fix, JBuilder and Weblogic. B.S. required. Send resume to 22523 Westbrook Cinco Ln, Katy, TX 77450 888-423-4993(F)/281-693-2633(T) Attn. Joseph Koothrappally

[redacted]

System Admins. to analyze, design/develop appls using Lotus Notes, Lotus Script, JScript, HTML, XML, Oracle, MS SQL Server, etc. under UNIX/Windows OS. Install, administer/configure Lotus Notes R4/R5, Domino R6 Windows NT; maintain backup, schedule maintenance, administer user accounts, provide user support for network problems. Require: B.S. or foreign equiv in CS/Engg(any branch) with 2 yrs exp in system admin. High Salary. F/T. Travel involved. Resume to: HR, Salem Associates, Inc., 405, 6th Ave., Ste 102, Des Moines, IA 50309.

Programmers to analyze, design, test data warehousing / data mart, software appls and ETL tools Ste Informatica and Cognos, Oracle MS SQL Server Dev 2000 under Windows OS OR analyze, design buss /scientific appls using SAP R/3 ABAP VB Oracle SQL Server on UNIX/ Windows envr gather and document reqs from user community test/troubleshoot project appln code according to system objectives Require B S or foreign equiv in CS/Engg (any branch) and 6 months exp in IT In lieu of BS, 3yrs of academic studies towards a Bachelors plus 1 yr of exp in IT will be acceptedHigh salary Travel involved F/T Respond to Smartsoft International Inc. 4898 South Old Peachtree Rd Ste 200 Norcross GA 30071

ComSpec International is looking for system/programmer analysts. Duties include design test data and test plan use Uniface Oracle Access XP Crystal Report. Qualified applicants must have BS with exp as software developer Please contact R.Brender@comspec-intnl com EOE.

Corpus has multiple openings for IT professionals Following skills preferred Oracle SQL PL/SQL COBOL, C/C++, VB SAP Java XML ERP ASP NT XSL Minimum BS degree Traveling is required for some positions. Please send resumes to info@corpusinc.com. EOE

Seeking qualified applicants for the following positions in Memphis TN: Senior Systems Programmer. Devise procedures to solve complex systems and applications problems. Requirements: Bachelor's degree* in computer science MIS engineering or related field plus 5 years of experience in systems programming. Experience with UNIX, C and logistics code development also required *Master's degree in appropriate field will offset 2 years of general experience Submit resumes to Sibi George FedEx Corporate Services 1900 Summit Tower Blvd Suite 1400 Orlando, FL 32810 EOE M/F/D/V

Manager of Customer Applications wanted by shipping and container co in Tampa, FL. Must have a minimum 4 years exp as a Computer Systems Analyst/Programmer Analyst or related occupation, with 4 yrs. exp. with AS400/ iSeries programming including CL, RPG, 2 yrs. exp. using RPGIV/ILE and 1 yr. exp using Robot, Implementer and Hawkeye Pathfinder. Refer to Job #MG100 Lykes Lines Limited, LLC (CP Ships), 401 East Jackson St., Suite 3300, Tampa, Florida 33602.

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Programmer/Analyst needed for analysis and design of systems solutions across multiple technical and business environments. Requires 3 years of experience in job offered or in related occupation of Programmer. Experience must include 3 years with Visual Basic and Oracle and/or SQL, and 2 years with ASP and Javascript. Salary offered $69,030. Send resumes to Bureau of Labor Standards, 45 State House Station Augusta Maine 04333-0045 Refer to job order #38061 for Programmer Analyst.

Prog/Analyststo design, develop/deploy complex appls using Cold Fusion Oracle Java Jscript, HTML, SQL Server Cold Fusion App Server WebLogic, etc. under Windows OS: analyze functional and user reqand new tech. to solve business problems, test, troubleshoot and debug appls. Require B.S. or foreign equiv in CS/Engg (any branch) field with 2 yrs exp in IT High salary F/T position. Travel Required Resume to HR, Smartsoft International Inc., 4898 South Old Peachtree Rd, Norcross, GA 30071

S/W Enggs to analyze, design develop appls using C++, Java, CORBA, EJB JDBC, JSP Rational Rose, CGI SQL, Oracle Crystal Reports, Weblogic under Windows/UNIX OS perform project scoping project planning project time/ cost schedules, quality of deliverables, study, evaluate new tech/methodologies, provide technical guidance for complex user problems. Require MS or foreign equiv in CS/Engg (any branch) & 1 yr exp. in IT High Salary F/T Travel involved Respond to HR, Unilinx, Inc., 4625 Alexander Dr., Ste 110, Alpharetta GA 30022.

Programmer Analysts. Plan, design, develop, configure, code, implement & analyze computer programs & systems. Modify existing application and provide systems support. Analyze users requirement to enhance system performance. Req Bachelor's degree or equivalent in CS, CE EE (Electrical or Electronic and Communication Engineering) Must be proficient in either C++ Oracle PowerBuilder MCSE, CCIE Unix Shell-programming, CrystalReports, CCNA, or Rational Rose. 40hr/wk, 9:00 a.m - 5:00 p.m Send resume to Think Development Systems, Inc., 6292 Lawrenceville Hwy Suite-C, Tucker GA 30084

Software Engineers Analyze requirements, formulate design, test, modify and develop systems/software applns, using MQ Series, Weblogic J2EE, RMI JMS, JDBC JNDI, JTA, TIBCO, UML, Netscape Directory Server, Oracle, DB2, PL/ SQL, etc. to determine feasibility; prepare & design specs; develop testing procedures. Reqd BS or Equiv. in edu & exp. in CS/Engg/Maths/related plus 2 yrs exp. Comp. salary, send resume to HR Surecom Inc., 62 West Main Street, Northboro, MA 01532.

Senior Software Engineer (Portland, Oregon) - Responsible for full life-cycle development of object-oriented multithreaded Windows applications using Visual C++ to provide network wide system solutions to report and control network consumption and improve end-user response time Develop algorithms for Socket based TCP/IP applications to manage distributed components that align network consumption for customers needs Use Layered Service Provider ("LSP") technology to implement product features. Must have Bach. deg or equiv in Comp Sci Eng. or related field. Must have 6 yrs of exp in the job offered or 5 yrs in a position involving full life cycle development of object-oriented Windows applications using Visual C++ Exp mentioned may have been obtained concurrently and must include (i) 1 yr of exp developing algorithms for Windows Socket based TCP/IP applications to manage distributed components, (ii) 2 yrs of exp building multithreaded apps for Microsoft Windows platform, and (iii) 1 yr of exp. implementing product features using LSP technology Must be legally authorized to work in the U S Please send resume to S Pandya (REF SSE) Centrisoft Corp., 707 Southwest Washington, Suite 1200, Portland, OR 97205.

Applications Support Analyst. Ontario, CA. Consult w/ SAP users to identify & analyze SAP processes & issues. Redefine SAP processes, recommend & help implement changes Change, maintain & document Warehouse SAP processes per ISO 2000 Assist QA Dept & processes. & act as internal ISO Auditor for Configuration Ctr "Write up" user needs, prog functions, & steps to develop/modify relevant programs & syst, prep workflow charts & diagrams re same Help resolve work problems w flow charts, project specs, programming. BS or equiv + 1 yr experience, incl QA. Fluent SAP R/3, AllClear, Visual C++ & C++ HTML ASP, Rational Rose Send resume to VP HR, En Pointe Technologies, 100 N. Sepulveda Blvd., 19th Fl., El Segundo, CA 90245

Programmers to analyze/ design database & other software appls using Oracle, SQL, Visual Basic Active X FormBuilder etc. under Windows and UNIX OS, develop system spec; enhance and modify existing appls: study evaluate new tech/methodologies; provide technical guidance for complex user problems. Requires B S. or foreign equiv. in CS/Engg (any branch) & 6 months of exp. in IT Apply by resume to HR, Fourth Technologies Inc. 585 Tollgate Rd., Ste I, Elgin, IL 60123

Senior Software Engineer sought by legal information services co with office in Glendale, CA. Exp in VB, OOAD methodology, COM, UML, DHTML, XML, ASP, C++/Java, IIS, ADO, C#, .NET, Oracle, Crystal Reports and SQL Server Analyze, design, develop, test & support web-based e-commerce applications for MS Windows. Resumes to HR Dept., CCH Legal Information Services, Inc., 111 Eighth Ave, NY, NY 10011.

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Partial List of Employers Includes: American Express Financial Advisors, ARAMARK Healthcare Support, Bed Bath & Beyond, Clear Channel Radio, Clement Publishing Group, Comcast, Daimler-Chrysler, Federal Aviation Administration, FedEx, Lockheed Martin, Merck, Progressive Insurance, Sovereign Bank, Takeda Pharmaceuticals, Target Stores and The Pep Boys

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ERP Business Process Manager

According to a recent poll by Computerworld, that included 11,500 IT employees, Hershey is "*The best place to work if you are an IT Professional*"

We are currently seeking qualified professionals to serve as SAP ERP Business Process Managers. The key responsibility of this role is to act as a bridge between the Information Services Group and the HR and Manufacturing organizations, working primarily on either the compensation and/or time management modules of SAP (2 open positions). In this role you will be responsible for all aspects of the implementation lifecycle including complex business process design, development & optimization, SAP configuration, strategic direction for the integration of various SAP modules, testing and the training and development of customer and junior team members. You will also be responsible for customer relationship management, project proposals, leading budgeting and resource planning within the area of expertise and providing overall strategic direction regarding the deployment of SAP at Hershey Foods Corporation.

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Hershey Foods

CW0397148/000R.2

Sr. SW Engr - As member of SW developmt. team, design & develop SW & sustain co.'s cutting-edge telephony devices. Will develop & enhance serviceability tools & participate in design & code reviews. Will test & integrate telecom products & provide critical bug fixes for customers. In addition, will provide customer SW enhancements & use programming/analytical skills in order to provide services for debugging. Must have B.S. in Comp. Eng'g, Comp Sci., E.E. or equiv + 5 yrs. exp. in the job offered or 5 yrs. progressively responsible post-grad. SW developmt. exp. (5yrs. exp. must include at least 2.5 years exp. w/ Telecom SW development.) In the alternative, employer will accept M.S. in stated fields + 2 yrs relevant exp. Must have knowledge in at least one of the following telecom protocols: ISDN or SS7 Call processing, ATM or TCP/IP, as well as strong coding skills in C. 40 hrs/wk. Salary: $92,833/yr. Send 2 copies of resume to: Case #200201802 and/or 200201644. Labor Exchange Office. 19 Staniford St 1st Fl, Boston MA 02114

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Sr. SW Engr - Develop, integrate, maintain & test complex communication protocols including, but not limited to: Sigtran, SS7/CCS7 & ISDN. Participate in design & code reviews of new SW & modifica'ns to exist'g SW. Develop, maintain & test telecom applications & system SW responsible for configuring & controlling the system, internal communication between SW entities, fault tolerant & redundant operation of SW. Analyze & document computerized telecom system SW reqs., functional specs., architectural specs. & design specs. Must have M.S. in Comp. Eng'g, Comp. Sci., E.E. or equiv. + 2 yrs. exp. in job offered or 2 yrs. exp. w/telecom SW development. (Exp. may be gained before or after M.S.). In the alternative, employer will accept Bachelor's degree + 5 yrs. of progressively responsible post-grad SW development exp., including 2 yrs. telecom SW developmt. exp. Must have proficiency in C programming, as well as knowledge of telecom protocols. 40 hrs/wk. Salary: $92,833/yr. Send 2 copies of resume to: Case #200201646. 2002 Labor Exchange Office. 19 Staniford St 1st Fl Boston MA 02114

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Sr SW Engr - As a member of SW developmt. team, design & develop Element/Network Management SW. Will determine SW developmt. process best practices including design & code reviews. Will prepare specs. for Element/Network Management SW. Will design & develop Plexus PlexView Element Manager SW. In addition will test & integrate EM SW w/ Plexus 9000 & other products developed by the company as applicable. Must have B.S. in Comp. Sci./Eng'g, Electrical/Electronics Eng'g or equiv. + 3 yrs. exp. in job offered or 3 yrs. exp. in SW developmt. Must have developmt. exp. w/ element/network mngmt. SW for the telecom industry. Must have exp. develop'g SW applications on UNIX platforms using Java and/or C/C++. 40 hrs/wk. Salary: $92,833/yr. Send 2 copies of resume to: Case #200201665. Labor Exchange Office, 19 Staniford St 1st Fl, Boston MA 02114

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Sr SW Engr - As member of SW developmt. team, design & develop SW & sustain co.'s cutting-edge telephony devices. Will develop & enhance serviceability tools & participate in design & code reviews. Will test & integrate telecom products & provide critical bug fixes for customers. In addition, will provide customer SW enhancements & use program'g/analytical skills in order to provide services for debugging. Must have M.S. in Comp. Eng'g, Comp. Sci., E.E. or equiv + 2 yrs. exp. in job offered or 2 yrs. exp. w/Telecom SW developmt. (exp. may be gained before or after M.S.). In the alternative, employer will accept Bachelor's degree + 5 yrs. of progressively responsible post-grad SW developmt. exp. includ'g at least 2.5 yrs. exp. w/telecom SW developmt. Must have knowledge in at least one of the following telecom protocols: ISDN, SS7 Call processing, or TCP/IP as well as strong coding skills in C. 40 hrs/wk. Salary: $92,833/yr. Send 2 copies of resume to: Case #200201687. Labor Exchange Office: 19 Staniford St. 1st Fl. Boston MA 02114

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Lack of Licensing Revives Criticism of Settlement

Microsoft's terms draw DOJ's concern

BY PATRICK THIBODEAU
WASHINGTON

A KEY PROVISION of the U.S. settlement with Microsoft Corp., the licensing of server interoperability protocols, has attracted scant interest from vendors. And that has brought renewed criticism of the settlement, which was announced nearly two years ago.

MICROSOFT SETTLEMENT

Only four companies have received licenses under the settlement, including two major storage vendors, according to a report released last week by the U.S. Department of Justice (DOJ) assessing the settlement. The administration and states that backed the settlement criticized Microsoft's licensing terms in the report.

But two of the companies that acquired licenses, EMC Corp. in Hopkinton, Mass., and Network Appliance Inc. in Sunnyvale, Calif., said the licenses will be used to assure corporate customers that their storage products won't be hindered by interoperability problems with Microsoft products.

"We see it as highly beneficial," said Mike O'Neill, senior director for strategic alliances at Network Appliance. "It becomes very valuable to a customer to know that the solution that they are investing in . . . has a pretty lengthy half-life to it," be said.

The protocols will be used in oetwork-attached storage (NAS) products — special-purpose file servers that sit in front of storage arrays, interact with Microsoft servers and allow file access over a network.

Tom Joyce, senior director of NAS product marketing at EMC, said the license means that if Microsoft changes technology direction, "we're in sync with them." Without the license, EMC would have to reverse-engineer the protocols.

Steve Kenniston, an analyst at Enterprise Storage Group Inc. in Milford, Mass., said, "The fear has always been that no matter what you did, Microsoft could change the rules on you."

But the royalties, rates and other terms that Microsoft set for the licenses have raised government concern. According to the DOJ report, "further steps may oeed to be takeo" on the licensing terms, including possible new court orders. A hearing is set for July 24.

From 20 to 1

The two other companies receiving licenses are VeriSign Inc. in Mountain View, Calif., which plans to use protocols in its security work, and media developer Starbak Communications Inc. in Waltham, Mass.

Microsoft spokesman Jim Desler said the company is working with the government on the licensing terms and is open to additional changes.

"We welcome government feedback, and hopefully, through a constructive process, we can make refinements and adjustments to the program," be said.

But Microsoft critics, including trade groups representing the company's rivals, say the paucity of companies acquiring licenses affirms their earlier complaints.

The "settlement is meaningless," said Edward Black, president of the Computer & Communications Industry Association in Washington, who said the agreement gave Microsoft too much power to set licensing terms and conditions.

But Hilliard Sterling, an antitrust expert at Much Shelist Freed Denenberg Ament & Rubenstein PC in Chicago, said the licensing outcome "may be indicative of the absence of any real need." ▸

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Continued from page 1

MCI Contracts

while a Government Services Administratioo review is under way, according to published reports.

David Drabkin, deputy associate administrator for acquisition policy at the GSA, acknowledged that his office is working oo a formal request by the GSA's inspector general to determine wbether MCI is "presently responsible" or if it should be suspended or debarred [QuickLink 39203].

"In this case, the recommendation that came from our [inspector general] wasn't accompanied by any in-depth investigative work showing what the processes were that failed in the company and that possibly led to them not being presently responsible," said Drabkin. "We have to get a little more information before we decide."

The ramifications of debarment could be enormous for government agencies. MCI remains a critical federal contractor, holding either prime or subcootractor status oo a wide range of contracts, including vital U.S. Departmeot of Defense programs.

Major Disruption

In a May 30 memorandum, GSA General Counsel Raymond McKenna stated that any shift away from MCI would disrupt telecommunications services to a broad swath of federal agencies, including military, law enforcement and homeland security organizations.

"Long-distance voice service to the Pentagon, the FBI's Trilogy data network, the National Weather Service's Weather Net, the Social Security Administration's national voice and data networks and the Centers for Medicare and Medicaid Service's Medicare/Medicaid Hotline could be jeopardized," wrote McKenna.

Also, MCI's prices remain the best choice for the government, McKenna said, adding that agencies would likely bave to bear "multimillion-dollar expenses" to switch to other carriers.

Vance Hitch, CIO at the U.S. Department of Justice, acknowledged that a suspension or debarment could disrupt services and introduce new expenses, especially for the FBI's Trilogy program — a $400 million network effort started in March.

"The FBI has just gone through a very aggressive and high-risk effort to get Trilogy in place and stable," be said. "It would be very disruptive to have to back off that and change."

A spokesman for the Defense Information Systems Agency (DISA), the Defense Department's telecommunications and network management agency, said a thorough review of all MCI contracts is now under way, and officials are evaluating alternative service providers to minimize the impact if MCI is debarred.

The DISA spokesman noted that some existing contracts, particularly those related to national security, may remain in effect after any suspension or debarment.

Ken Smalling, a spokesman for Electronic Data Systems Corp., which relies on MCI for wide-area network services for its $6.9 billion Navy/Marine Corps Intranet (N/MCI) contract, said Plano, Texas.-based EDS has the relationships in place to switch to alternative service providers if necessary. He added that so far, MCI has met or exceeded service requirements under the N/MCI contract [QuickLink 39264].

Morton Bahr, president of the Washington-based Communications Workers of America, which supports debarment of MCI, said the government has plenty of viable alternatives. "Clearly, both AT&T and Sprint, with national networks that equal and surpass that of MCI, [would] have no problem handling all available business," said Bahr. ▸

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Lack of Licensing Revives Criticism of Settlement

Microsoft's terms draw DOJ's concern

BY PATRICK THIBODEAU
WASHINGTON

A KEY PROVISION of the U.S. settlement with Microsoft Corp., the licensing of server interoperability protocols, has attracted scant interest from vendors. And that has brought renewed criticism of the settlement, which was announced nearly two years ago.

MICROSOFT SETTLEMENT

Only four companies have received licenses under the settlement, including two major storage vendors, according to a report released last week by the U.S. Department of Justice (DOJ) assessing the settlement. The administration and states that backed the settlement criticized Microsoft's licensing terms in the report.

But two of the companies that acquired licenses, EMC Corp. in Hopkinton, Mass., and Network Appliance Inc. in Sunnyvale, Calif., said the licenses will be used to assure corporate customers that their storage products won't be hindered by interoperability problems with Microsoft products.

"We see it as highly beneficial," said Mike O'Neill, senior director for strategic alliances at Network Appliance. "It becomes very valuable to a customer to know that the solution that they are investing in ... has a pretty lengthy half-life to it," he said.

The protocols will be used in network-attached storage (NAS) products — special-purpose file servers that sit in front of storage arrays, interact with Microsoft servers and allow file access over a network.

Tom Joyce, senior director of NAS product marketing at EMC, said the license means that if Microsoft changes technology direction, "we're in sync with them." Without the license, EMC would bave to reverse-engineer the protocols.

Steve Kenniston, an analyst at Enterprise Storage Group Inc. in Milford, Mass., said, "The fear has always been that no matter what you did, Microsoft could change tbe rules on you."

But the royalties, rates and other terms that Microsoft set for the licenses have raised government concern. According to the DOJ report, "further steps may need to be taken" on the licensing terms, including possible new court orders. A hearing is set for July 24.

From 20 to 1

THEN: 20 states, later joined by the Clinton administration, sued Microsoft in 1998, charging the company with antitrust violations.

NOW: Massachusetts is the only state still pursuing an appeal of U.S. District Judge Colleen Kollar-Kotelly's ruling that the Bush administration-backed settlement was in the public interest. West Virginia, the other holdout, settled in June.

NEXT: The U.S. Court of Appeals will hold a hearing Nov. 4 on Massachusetts' appeal.

The two other companies receiving licenses are VeriSign Inc. in Mountain View, Calif., which plans to use protocols in its security work, and media developer Starbak Communications Inc. in Waltham, Mass.

Microsoft spokesman Jim Desler said the company is working with the government on the licensing terms and is open to additional changes.

"We welcome government feedback, and hopefully, through a constructive process, we can make refinements and adjustments to the program," he said.

But Microsoft critics, including trade groups representing the company's rivals, say the paucity of companies acquiring licenses affirms their earlier complaints.

The "settlement is meaningless," said Edward Black, president of the Computer & Communications lodustry Association in Wasbington, who said the agreement gave Microsoft too much power to set licensing terms and conditions.

But Hilliard Sterling, an antitrust expert at Much Shelist Freed Denenberg Ament & Rubenstein PC in Chicago, said the licensing outcome "may be indicative of the absence of any real need." ◗

COURT COVERAGE

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QuickLink s1100
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MCI Contracts

while a Government Services Administration review is under way, according to published reports.

David Drabkin, deputy associate administrator for acquisition policy at the GSA, acknowledged that his office is working on a formal request by the GSA's inspector general to determine whether MCI is "presently responsible" or if it should be suspended or debarred [QuickLink 39203].

"In this case, the recommendation that came from our [inspector general] wasn't accompanied by any in-depth investigative work showing what the processes were that failed in the company and that possibly led to them not being presently responsible," said Drabkin. "We have to get a little more information before we decide."

The ramifications of debarment could be enormous for government agencies. MCI remains a critical federal contractor, holding either prime or subcontractor status on a wide range of contracts, including vital U.S. Department of Defense programs.

Major Disruption

In a May 30 memorandum, GSA General Counsel Raymond McKenna stated that any shift away from MCI would disrupt telecommunications services to a broad swath of federal agencies, including military, law enforcement and homeland security organizations.

"Long-distance voice service to the Pentagon, the FBI's Trilogy data network, the National Weather Service's Weather Net, tbe Social Security Administration's national voice and data networks and the Centers for Medicare and Medicaid Service's Medicare/Medicaid Hotline could be jeopardized," wrote McKenna.

Also, MCI's prices remain the best choice for the government, McKenna said, adding that agencies would likely have to bear "multimillion-dollar expenses" to switch to other carriers.

Vance Hitch, CIO at the U.S. Department of Justice, acknowledged that a suspension or debarment could disrupt services and introduce new expenses, especially for the FBI's Trilogy program — a $400 million network effort started in March.

"The FBI has just gone through a very aggressive and bigh-risk effort to get Trilogy in place and stable," he said. "It would be very disruptive to have to back off that and change."

A spokesman for the Defense Information Systems Agency (DISA), the Defense Department's telecommunications and network management agency, said a thorough review of all MCI contracts is now under way, and officials are evaluating alternative service providers to minimize the impact if MCI is debarred.

The DISA spokesman noted that some existing contracts, particularly those related to national security, may remain in effect after any snspension or debarment.

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FRANK HAYES ▪ FRANKLY SPEAKING

Open for Business

WHAT, OH WHAT, has happened to these open-source people? At last week's O'Reilly Open Source Convention in Portland, Ore., I didn't hear a lot about the philosophy and politics of "the movement." I didn't hear bitter fights over which open-source license is best, or endless fretting about the confusion over what the *free* in free software means — free as in beer? Free as in ride? Free as in not in jail?

What I did hear a lot about was business.

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FRANK HAYES, *Computerworld*'s senior news columnist, has covered IT for more than 20 years. Contact him at frank_hayes@computerworld.com.

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Just don't ignore it — or in a few years, you could be wondering what, ob what, has happened to your IT shop. ▸

SHARK TANK

Switcheroo

PCs are randomly dropping off the network, and this big contractor is about to lose the contract because of it. In a last-ditch effort, consultant pilot fish is called in, and he finds the problem: a network switch he knows from experience is flaky. But why didn't the contractor's staff spot it? "When they were testing, they used a packet sniffer and had to replace that switch with a hub so they could monitor both sides simultaneously," sighs fish. "Then they put it back before they left."

Stuck

User tells support pilot fish that she knocked a key off her laptop. She replaced it, but now it won't work. Is the key loose? fish asks. "Not now," user replies. What do you mean, not now? fish asks. "It was loose, but I fixed it," user says. "I used super glue."

Stripped

Layoffs are coming, so this insurance company's managers rank all employees for future termination. "To maintain secrecy, they shredded the printed spreadsheets with the ratings," says a pilot fish there. "Unfortunately, the spreadsheets were printed in landscape mode, so the shredder blades separated each employee and rating, by name, on his own strip of paper. After I came across them in the recycling bin, I knew each person's rating – all 126 of them."

Stymied

After top management lays off every programmer in the department except him, overworked pilot fish takes a vacation day. When he returns, he finds out his manager is in hot water with the boss. The complaint? Fish groans. "They said she wasn't providing adequate programming coverage for the department."

Shrunk

Pilot fish notices that the nearly finished new computer room uses the 6'8" door from the old glass house. The equipment racks are 6'7", fish says – how will we get them in? "Roll them from the old room into the new one," says contractor. But the new room has an 8-inch raised floor, fish points out. "The design was quickly modified," he says, "to include an 8-foot door."

Stopped

It's the late 1980s, and this pilot fish discovers – the hard way – that if anyone hits the mainframe's stop button, the start button won't restart it; it has to be completely rebooted. Luckily, a vendor engineer and his boss are visiting, and fish describes the problem. "Impossible," engineer says. "Let me show you." Says fish, "I still remember me and his boss yelling 'No!' as he reached out and hit the stop button."

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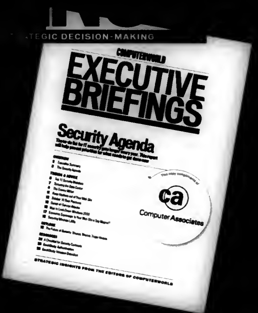

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